

# THE DOCK & HARBOUR AUTHORITY

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## Editorial.

### *The Port of Norfolk, Virginia, U.S.A.*

Norfolk, which is situated on Hampton Roads, has an ideal situation for a port, as it is completely sheltered and is the natural outlet for the State of Virginia.

Norfolk, as a port, has been entirely dependent upon transportation facilities with its hinterland and at the present day Norfolk has no less than 8 railway terminals which have been formed into a belt line, so that interchange from one line to another is possible. Subsequent upon these railroad developments the business of the port rapidly increased, the principal commodities for export being cotton and tobacco.

The facilities at Norfolk for dealing with traffic are in every way up to date and include 18 open and 63 covered piers with a capacity on railway tracks for 5,543 trucks and sufficient warehouse space to meet any requirements.

A comparison of the vast growth in the trade of Norfolk is worth recording. In 1900 there was a total tonnage turnover in foreign and domestic commerce of 5,538,051, whereas in 1929 it reached the remarkable figure of 16,552,892. In value the figures in 1900 were 219,662,236 dollars as against 816,298,165 dollars in 1929.

The Port of Norfolk and its development forms the subject of this month's supplement and an illustrated article appears on another page.

### *Annual General Meeting of the Dock and Harbour Authorities' Association.*

The Annual General Meeting of the Dock and Harbour Authorities' Association for the year ended 31st December, 1931, was held at the Caxton Hall, Westminster, S.W.1, on Wednesday, 17th February, 1932, when the annual report was presented and adopted. Mr. R. E. Herdman, Chairman of the Belfast Harbour Commission presided at the meeting.

The most prominent and interesting case which had been dealt with during the year by the Association was the Seaham Harbour Case. The Association had taken up this case successfully the previous year, in which the Seaham Harbour Harbour Co. had been assessed by the Commissioners for Income Tax on Government grants received towards capital works.

The Crown had appealed against the decision, but this appeal was dismissed and the Association felt great satisfaction at the result of the case. The result made it clear that those of them who had embarked on large schemes for the relief of unemployment were not subject to Income Tax on the grants they received.

During the year the Association had received representations from the Traders' Co-ordinating Committee on Dock Charges and the Committee had suggested that there should be a reduction in their charges. The Association quite realised the need for making charges as low as possible and had given constant attention to the subject for many years.

Costs, especially those for labour, were very high and had needed all the co-ordination possible from every source if charges were to be further reduced.

Lord Ritchie of Dundee, Chairman of the Port of London Authority, in the course of his speech also made mention of the Seaham Harbour case and considered that those Authorities which had contributed towards the legal expenses of the Seaham Harbour Co. would secure at least £1,000 for every £1 they had subscribed. He also appealed for greater attention being paid by the various Authorities to safety arrangements. A great deal had been done voluntarily by some, but unless all came into line there was the possibility of compulsory terms being imposed throughout the country.

Mr. J. E. Dawson, Chairman of the River Wear Commission, was unanimously elected President for the ensuing year, and he sincerely hoped that more Dock and Harbour Authorities would join the Association and so strengthen their position.

The following were elected Vice-Presidents:—Lord Ritchie of Dundee (London); Mr. C. E. McGloughlin (Dublin); Sir William Crundall (Dover); Mr. R. D. Holt (Liverpool); and Mr. W. F. Robertson (Clyde). Lt.-Colonel J. T. C. Moore-Brabazon, M.C., M.P. for Wallasey (Port of Liverpool), was elected Parliamentary Chairman for the Association.

The following members were elected to the Executive Committee for the ensuing year:—Lt.-Col. T. G. Poole (North-East Coast of England); Sir David J. Owen (London District and South Coast); Mr. R. H. Jones (Bristol Channel); Mr. J. G. B. Beazley (Liverpool and North-West District); Mr. F. A. Eyre (Manchester Ship Canal); Mr. G. W. Service (West Coast of Scotland); Mr. B. L. Nairn (East Coast of Scotland); Mr. M. J. Watkins (Northern Ireland); Mr. William Hewat (Irish Free State).

Owing to shortage of space we are unavoidably holding over the Report of the Executive Committee for the year and this will be published in our next issue.

### *The Hartlepool Port and Harbour Commission.*

It was reported to the annual meeting of the Hartlepool Port and Harbour Commission in February that the surplus funds at the end of 1931 were £22,985. The financial statement showed an addition to this surplus of £11,000, set aside for plant renewals. The surplus on the year's working totalled £4,556, as against £3,166, and this increase was mainly due to the reduced outlay on dredger repair and economy generally. Mr. W. Ropner was re-elected chairman.

### *Port of Ardrossan.*

During 1931, 2,170 vessels entered Ardrossan Harbour compared with 2,051 vessels during 1930, while the net registered tonnage for 1931 was 784,145, as against 744,431 in 1930, the year before the war.

While the tonnage of vessels has increased, the tonnage of cargo has decreased, the figures for 1931 being 427,611 cargo tons compared with 460,754 cargo tons for 1930 and 963,051 cargo tons for 1913.

The largest vessels using Ardrossan have a carrying capacity of 11,500 tons.

Iron and steel products and raw material decreased compared with the previous year by 88,643 cargo tons. Coal shipments increased by 50,801 tons, reaching a total of 193,733 tons. In the oil business there was an increase of 41,954 tons, 80 tankers entering the port during the year.

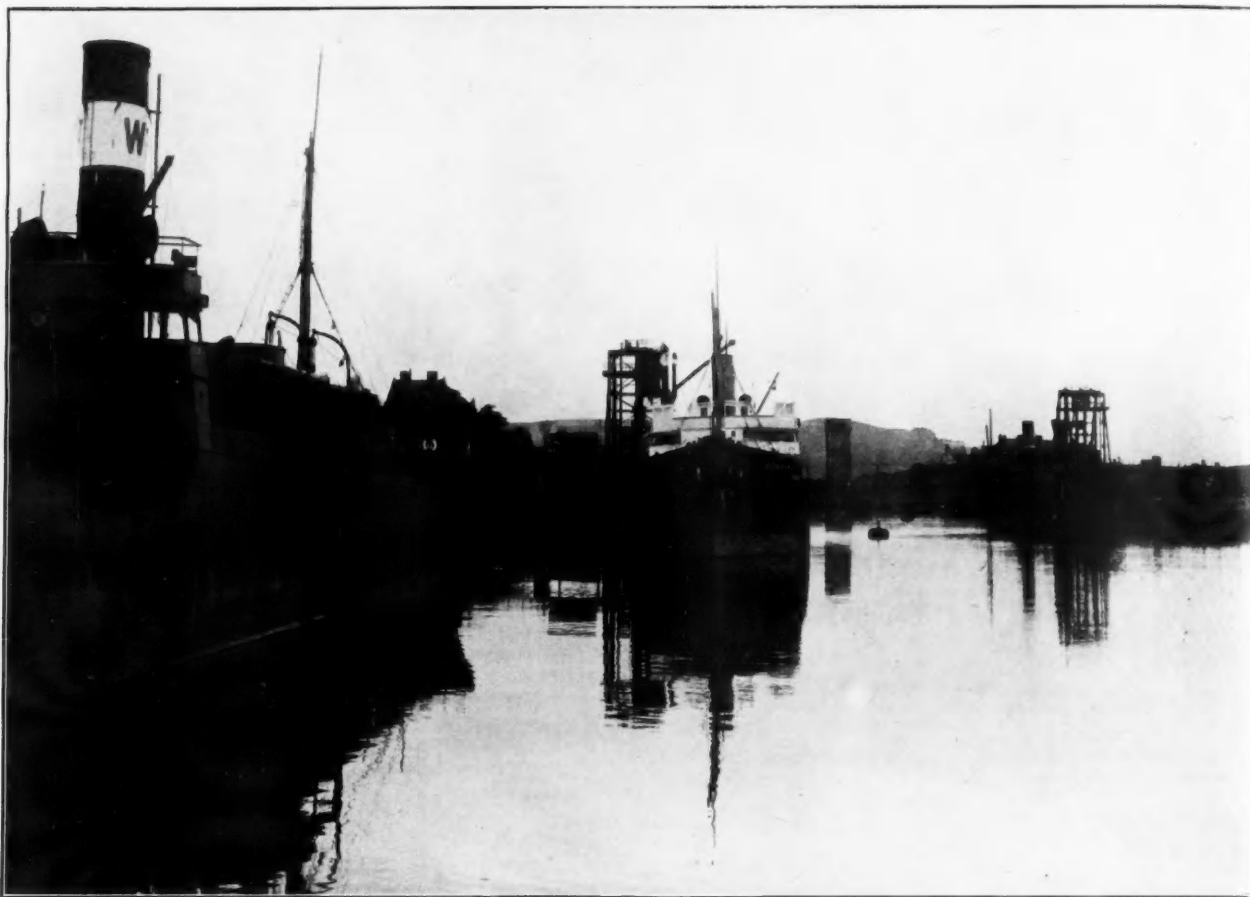
Nearly one million units of electricity were consumed during the year on the harbour, excluding the Ardrossan Dockyard area.

### *Record Trade at the Port of Toronto.*

During the past season the Port of Toronto has experienced a record volume of water-borne trade, there having been an increase of over 60 per cent. in the tonnage of freight handled. Water-borne trade in the harbour reached a grand total of 2,115,830 short tons, a gain of 822,966 tons over the 1930 total of 1,292,864 tons. The heavy increase is attributed to the opening of the new Welland Ship Canal, enabling large upper lake vessels to reach Toronto harbour.

Further increases are looked for in the near future, as the Welland Ship Canal operated during the past season at a depth limit of eighteen feet instead of the full depth limit of twenty-five feet.

## Scottish Harbour Notes



Burntisland Harbour. The L. & N.E. Rly. Co.

### Question of Free Port at Glasgow.

**T**HERE recently appeared in the Glasgow newspapers paragraphs concerning the question of making Glasgow a free port for re-export goods, and subsequently a short but informative interview with Mr. Harold Ford (Commercial Manager of the Clyde Navigation Trust) was published in the Press. Mr. Ford stated that the Clyde Navigation Trust had received no official communication up to date on the question at issue. "In any case," added Mr. Ford, "the point will not affect Glasgow very materially. The amount of goods coming into the Port of Glasgow and then being trans-shipped and exported is a small proportion of the total volume of trade of the port." It is also understood that the Leith Dock authorities have likewise received no official communication on this subject, and it may be added that at this port also the proportion of trans-shipped goods is small.

### Dundee Harbour Trustees and Local Council.

Dundee Harbour Trustees are to withdraw their opposition to the Provisional Order being promulgated by Dundee Town Council subject to an agreement regarding the maintenance of Dock Street by the Council. The decision was reached at a recent meeting of a sub-committee of the Lord Provost's Committee, which was attended by representatives of the Harbour Trust. It was agreed that the Town Council should keep up the whole surface of Dock Street north of the chain which is stretched across the north boundary of the docks, with the exception of the maintenance of the rails and setts between them which would be maintained by the Harbour Trustees to the satisfaction of the city engineer. The Corporation would also, on account of the increased traffic on the road, undertake to police and light the street north of the chain, and on the undertaking being given the Harbour Trustees would withdraw their objections to the Provisional Order.

### Aberdeen Harbour and Curtailment of Expenses.

An interesting and lengthy report was presented at a recent meeting of Aberdeen Harbour Board on the question of the necessity at this period for the curtailment of expenditure. This report had been prepared by a sub-committee of the Finance Committee, and this sub-committee recommended that six workmen (whose ages ranged from 67 to 75 years and whose service varied from 27 to 48 years) should be retired, and that it be remitted to the Finance Committee to submit a report on the pensions to be awarded to these workmen. A rearrangement of duties following these retirements should not involve the

engagement of additional staff, and it was estimated that a saving of approximately £500 per annum would be effected. The sub-committee (after reviewing the conditions of employment of all the harbour staffs and employees) were of opinion that no reduction of salaries or wages should meantime be made.

It was further stated that this sub-committee of the Finance Committee of the Aberdeen Harbour Board had also considered the possibility of deferring meantime any portion of the maintenance expenditure on works, but agreed that no true economy would be effected by deferring repairs necessary to maintain the harbour in an efficient state. So far as capital expenditure was concerned, the only works approved by the Board (and now in progress) were the widening of the wharf at the fish market, a protection jetty at the east end of the fish market, and the reconstruction of Albert Quay; and it was felt that no curtailment of expenditure on these works was advisable. The sub-committee recommended that any further scheme involving capital expenditure should be considered in relation to the financial return to be derived therefrom. The Board (on the recommendation of the Finance Committee) approved of the report.

### Fraserburgh Harbour Commissioners Lose Appeal against Valuation.

Judgment was recently pronounced in the Valuation Appeal Court, Edinburgh, in the case on appeal of the Harbour Commissioners of Fraserburgh with reference to the gross annual value of the harbours and quays belonging to the appellants, which the assessor had entered in the Valuation Roll at £11,546. The appellants contended that it should be £10,595. As the result of extraordinary damage sustained by the action of the sea or other forces in the harbour, the foundations of Provost Anderson's Jetty went wrong, and the walls became bulged. Representations were made by the Fishery Board to the Development Commissioners for a grant, and the cost was then estimated at £6,000. While the representation was before the Commissioners the jetty collapsed, and this resulted in a total sum of £9,000 being required for this item. Grants were made, and during the year ending October, 1930, the appellants received instalments to the amount of £4,754. The assessor's figure of value included the grants of £4,754 received by the appellants and also an expenditure of a similar amount; while the computation for which the appellants contended excluded the grants received, but included a charge against the revenue, the expenditure of £4,866 incurred in connection with the work on the jetty and repairs to the pontoon deck.

*Scottish Harbour Notes—continued*

It was contended by the appellants that the Government grants received did not fall to be included as revenue of the undertaking, and the works and repairs carried out during the period in question were ordinary maintenance and repairs on which the total expenditure fell to be treated for valuation purposes as expenditure of the undertaking. The assessor, on the other hand, submitted that the Government grants received were extraordinary in character, and should not be treated as ordinary revenue of the undertaking; and, further, that the expenditure was incurred in the cost of extraordinary repairs not of the nature of maintenance, and was not borne by the undertaking. The Committee sustained the valuation and dismissed the appeal. Lord Hunter said the case was of an exceptional character. The expenditure was extraordinary in character and was not made out of the ordinary revenue of the undertaking. Grants were made expressly to meet the special expenditure and, in these circumstances, the assessor and the committee were right in leaving out of computation both the grant and the expenditure to which the grant applied.

*Greenock Harbour Repairs.*

In a report to Greenock Chamber of Commerce, Mr. D. M. Ferguson (Vice-Convener of the Shipping Section) expressed satisfaction at the continued efforts of the local Harbour Trustees to bring the port into a first-class state of repair. During the last year the western caisson of the James Watt Dock was overhauled at a cost of £11,000, and, with the aid of a Government grant, the south quay of the East India Harbour was being reconstructed in conjunction with the diversion of the Dellingburn. The total cost of restoring this harbour to its original condition was about £10,000, including a considerable sum for dredging, and the hope was expressed that during the coming year there would again be available a depth of 20-ft. at high tide. The coaling crane at James Watt Dock jetty had also been extensively overhauled and was now capable of dealing with a 30-ton lift. The crane could now deal with the larger type of coal wagon and give improved despatch to steamers bunkering at the port.

It was further mentioned in this report that work in connection with the rectification of the Garvel Graving Dock was commenced towards the end of August last, and should be completed towards the end of this year. The new entrance (with perpendicular sides 70-ft. apart) would not only allow the largest vessel capable of using the dock to be accommodated, but would also mean that if the dock at a later date was deepened the new entrance would have a sufficient margin to enable it still to serve the deepened dock. With the return of more prosperous times to the shipping trade there was bound to be a great demand for docks which could accommodate modern vessels, and it would no longer be necessary for dry-docking.

On completion of the work the dock was to be leased to the Greenock Dockyard Co., Ltd., for a period of 15 years, and the repair centre which this company proposed to establish would benefit the town and find employment for a considerable number of local tradesmen.

*Additional Expenditure Involved in Reconstruction Works by Clyde Navigation Trustees.*

In connection with reconstructing and widening of Plantation Quay it has been reported by the New Works Committee of the Clyde Navigation Trustees that this undertaking will involve additional expenditure. The reconstruction and widening was authorised by the Trustees under an unemployment grant in May, 1930, at an estimated expenditure (including the erection of a goods shed thereon) of £95,000. The engineer has now reported that the rate of progress of the reconstruction work had recently been very slow on account of the nature of the ground which is being encountered adding greatly to the difficulties in pile driving. It had become apparent that it would be necessary to alter the present method of construction, and adopt the method which had to be carried out where similar difficulties had been encountered in the past by founding the wall on caissons previously sunk through the boulder clay by compressed air. This would involve additional expenditure of about £20,000, and the engineer had accordingly taken offers for the caisson foundations. A tabulated list showed that the offer by Sir William Arrol and Co., Ltd., was the lowest at £18,863. The Committee approved of the method of construction as proposed, and agreed to accept the offer of Sir William Arrol.

*Garlieston Harbour's Satisfactory Year.*

Despite the depression in the shipping industry during last year it was very gratifying to the subscribers to Garlieston Harbour to learn at the recently held annual meeting that this harbour had been able to hold its own. Gratification was generally expressed by the shareholders that, after meeting all expenditure for the year, there was a goodly cash balance, although there had been collected £20 less in dues and about £5 less interest on capital invested through having to pay heavier income tax and through receiving smaller dividends. During the past year (it was further reported) nothing but absolutely necessary repairs at the harbour had been carried out, and the harbour stores and breakwater were all in good repair. Some very heavy timber traffic had to be dealt with during the period under review, and this was trying the structural strength of the harbour. Some repairs might, therefore, be necessary during the ensuing year, and accordingly the Harbour shareholders remitted this matter to the Working Committee with powers to execute any repairs that might be urgently required.

*Artificial Assistance to Shipbuilding*

It has been reported in the Press that the Danish Government contemplates extending the present Export Credit System to cover credit facilities to Danish shipowners to the amount of 15 mill. kroner for the purpose of building new vessels in Danish shipbuilding yards.

In this connection representations have been made by the President of the Baltic and International Maritime Conference to the Danish Minister of Commerce on the basis of resolutions passed at the meetings of the Conference.

Thus, a meeting in Copenhagen in May, 1930, deplored the action of Governments in providing financial facilities to their nationals in connection with shipping undertakings, and laid down that this action must be considered to be inimical to the sound development of international commercial relations which are best served when competition is free and unfettered by political considerations.

At a meeting held in Brussels in May, 1931, the attitude of international shipping to the question of artificial assistance to shipbuilding was further emphasised. The opinion was expressed that the prolonged depression on the freight markets of the world had been aggravated by the artificially stimulated building of tonnage over and above the requirements of the world trade. All shipowners, individually and through their national organisations, were urged to bring pressure to bear on Governments and other responsible bodies with a view to inducing them to discontinue the granting of facilities, whether to shipbuilders or to shipowners, and whether in the form of direct subsidies or long credits. A continuation or any extension of this practice might be calculated to artificially increase the world's tonnage and to prolong interminably the present crisis.

In the representations made by the Conference to the Danish Government it was pointed out that since the passing of these resolutions the situation had gradually become worse; in fact, it would not be too much to say that at present a greater percentage of the world tonnage than at any previous period

is laid up, and that, even so, it is practically impossible to find profitable employment for the vessels still trading, many of which carry cargoes at a considerable loss.

This situation is by no means due only to the prevailing depression in the commerce and trade of the world. If that were so, it might be argued that the depression, however severe and however prolonged, must sooner or later change for the better, which would again make things correspondingly easier for shipping, in expectation of which it might at any rate be a sound business proposition to consider the building of new tonnage if this could be done on sufficiently favourable terms.

The fact is, however, that even if there is a return to what may be called normal commercial conditions, the tonnage available will considerably exceed the requirements. To grant credit facilities for the building of new vessels might, therefore, be compared with similar Government grants, for instance, to the building of houses at a time when there is a surplus of housing accommodation.

The only reasonable hope of a permanent improvement in shipping is the gradual reduction of the world tonnage by losses and breaking up, until its volume corresponds better than is the case at present to the requirements of the world trade. Any action tending to interfere with this natural process will only prolong it and thus defeat its own object; instead of making things easier for shipowners and shipbuilders, as intended it will make them more difficult and cause further unemployment in the long run.

The Danish Government was urged to give these facts careful consideration, not only on the basis of what would serve the immediate interest of Danish shipbuilders and shipowners, but also on the basis of the effect the decision of the Danish Government might have on the attitude of other Governments which are at present holding aloof from supporting their shipbuilders and shipowners in a like manner.



## Italian Harbour Affairs

**S**UPPLEMENTING previous reports in connection with the development of shipping at Italian ports during 1931, it may be interesting to note that according to the statistics which have just been published by the Istituto Centrale di Statistica the following is a detailed summary of the position of the various Italian ports:—

		ARRIVALS AND CLEARANCES			
		No.	N.R.T.	Goods Imported Tons	Goods Exported Tons
Savona ...	1931	2,502	2,311,970	1,454,651	222,782
	1930	2,544	2,426,079	1,669,635	243,431
	1913	4,610	2,007,592	1,660,616	123,073
Genova ...	1931	9,369	19,557,495	5,718,321	870,082
	1930	10,065	20,320,145	6,234,631	908,828
	1913	12,383	14,457,442	6,214,184	1,231,822
Leghorn ...	1931	6,817	7,301,120	1,194,065	399,902
	1930	7,252	7,519,403	1,557,407	435,024
	1913	8,835	5,421,673	1,270,369	389,521
Civitavecchia ...	1931	2,502	3,448,251	833,871	100,960
	1930	2,716	3,743,128	988,550	78,881
	1913	2,610	1,770,280	597,458	74,310
Naples ...	1931	20,456	20,771,833	1,777,285	387,706
	1930	19,982	20,412,816	1,881,486	342,340
	1913	28,225	18,538,131	1,907,552	511,658
Brindisi ...	1931	2,463	4,797,297	131,793	14,681
	1930	2,377	4,233,363	110,816	16,383
	1913	3,205	4,015,766	246,680	63,256
Bari ...	1931	3,418	2,833,141	279,417	54,386
	1930	3,582	2,889,738	349,877	61,851
	1913	3,566	2,322,463	360,895	91,503
Ancona ...	1931	4,138	2,389,960	456,264	61,784
	1930	5,592	2,621,873	669,580	55,173
	1913	7,222	2,645,616	780,222	133,448
Venice ...	1931	7,633	8,473,757	2,321,499	472,519
	1930	7,487	8,439,561	2,523,637	438,649
	1913	8,077	4,602,783	2,287,875	375,000
Trieste ...	1931	33,765	9,927,794	1,822,417	649,882
	1930	33,910	9,797,903	1,637,083	806,265
	1913	—	—	—	—
Fiume ...	1931	11,970	4,361,546	369,532	218,988
	1930	12,654	5,077,879	482,265	300,741
	1913	—	—	—	—
Messina ...	1931	7,750	4,164,956	318,936	129,349
	1930	7,145	4,087,432	349,759	121,904
	1913	4,944	4,638,376	387,911	191,029
Catania ...	1931	4,968	3,956,751	411,913	157,242
	1930	5,059	4,014,328	439,248	163,695
	1913	8,373	4,876,809	556,036	324,717
Syracuse ...	1931	2,499	2,868,085	77,159	51,827
	1930	3,026	3,130,861	92,003	58,326
	1913	3,876	2,564,982	93,141	105,270
Palermo ...	1931	10,653	7,361,098	516,915	137,378
	1930	5,533	6,319,310	618,310	159,295
	1913	7,868	6,930,037	622,815	267,048
Cagliari (Sardinia)	1931	2,645	1,770,291	226,744	271,256
	1930	2,366	1,889,452	274,482	266,172
	1913	2,468	978,799	193,072	216,392

It will be noticed that shipping at the various Italian ports has not shown an identical tendency, since at Savona, for example, while figures for 1931 show a depression in respect to 1930 both in connection with imports and exports, the figures in respect to 1913 show a decline in regard to imports, but an increase in regard to exports; at Genoa a decline is noticed both in respect to 1930 and 1913 on imports and on exports; at Leghorn there has been a drop in respect to 1930 but things have remained unaltered in respect to 1913; at Civitavecchia both imports and exports have improved in comparison with the pre-war figures, also at Venice and at Cagliari (Sardinia), while at other ports the crisis has influenced the development of trade both compared with 1930 and 1931 results. If the figures of the leading Italian ports such as Genoa, Naples, Venice, Trieste, etc., are compared with those of the largest European ports it will be seen that the influence of the crisis has been felt in Italy much less than elsewhere.

According to statistics which have just been published by the Italian Ministry for Communications, shipping at Italian ports during the month of January, 1932, included the arrival of 15,207 ships representing 6,391,300 net reg. tons and carrying 1,826,247 tons of goods and 266,433 passengers, and the clearance of 15,223 ships, 6,401,681 net reg. tons, 602,004 tons of goods and 256,698 passengers. Total shipping during January, 1932, included thus the arrival and the clearance of 30,430 ships, 12,792,981 net reg. tons, 2,428,341 tons of goods and 523,131 passengers. During the corresponding period of 1931 shipping at Italian ports included the arrival of 13,686 ships, 6,118,069 net reg. tons, 1,826,273 tons of goods, 265,269 passengers, and the clearance of 13,743 ships, 6,185,739 net reg. tons, 606,494 tons of goods, and 258,047 passengers, making a total of arrivals and clearances for January, 1931, of 27,429 ships representing 12,303,808 net reg. tons with 2,432,767 tons of goods and 523,316 passengers. It

will be seen that shipping at Italian ports, during the month of January 1932, has shown a total decrease of about 4,000 tons, and if the figures are compared with those of the previous months of 1931, they show an improvement, and there is no doubt that from this situation there is reason to believe that the crisis has reached its lowest in Italy, and that an improvement may soon be expected. As yet only detailed figures for Genoa, Venice and Trieste have been published.

The statistics published by the Consorzio Autonomo del Porto di Genova show that shipping during the month of January, 1932, included the arrival of 401 ships representing 771,648 net reg. tons and 420,256 tons of goods, against 402 ships, 809,344 net reg. tons and 472,359 tons of goods during the corresponding month of 1931, showing a decrease of 1 ship, 37,696 net reg. tons and 52,103 tons of goods; and the clearance of 393 ships, 827,517 net reg. tons and 68,313 tons of goods, against 407 ships, 866,288 net reg. tons and 72,622 tons of goods, being a decrease of 14 ships, 38,771 net reg. tons and 4,309 tons of goods. Total shipping at Genoa included 794 ships arrived and cleared, 1,599,165 net reg. tons and 488,569 tons of goods, against 809 ships, 1,675,632 net reg. tons and 544,981 tons of goods, this being a decrease of 15 ships, 76,467 net reg. tons and 56,412 tons of goods.

The Provveditorato del Porto di Venezia has issued the following summary of the development of shipping at that port during January, 1932:—

	Imports	Exports	Total
January, 1932 ...	173,694	38,737	212,431
January, 1931 ...	180,252	56,927	237,179
	-6,558	-18,190	-24,748

The decrease of 6,558 tons or 3.61 per cent. in imports is due to the smaller arrivals of coal (-23,500 tons) and oil (-7,800 tons), compensated by the larger imports of lumber (+ 8,000 tons), cereals (+ 2,500 tons), salt (+ 6,100 tons), cotton (+ 6,100 tons), and other goods (+ 2,042 tons). The decrease of 18,190 tons, or 32 per cent., in exports is due exclusively to the declined shipments of pyrite ashes.

The Consiglio Provinciale dell'Economia at Trieste has published the following detailed schedule of the development of shipping at Trieste:—

		1932	JANUARY	1931
ARRIVALS.				
By rail (Centials)	...	447,018		684,668
By sea "	...	1,242,089		1,392,869
Total	...	1,689,107		2,077,537
CLEARANCES.				
By rail (Centials)	...	797,246		870,985
By sea "	...	430,750		526,479
Total	...	1,227,996		1,397,464
TOTAL.				
By rail (Centials)	...	1,244,264		1,555,653
By sea "	...	1,672,839		1,919,348
Total	...	2,917,103		3,475,001

In connection with the harbour enlargements to be carried out at Ancona, it is understood that they have to include the extension of the Northern mole by 300 metres and the extension of the Southern mole by 372 metres. These works are to be carried out with concrete blocks of 400 tons each, while the new pier is to have a quayage of about 600 metres, and is to consist of concrete blocks placed in four ranges. The space resulting from these new harbour facilities will have an area of 35,000 square metres, on which new warehouses, electric cranes, etc., are to be placed. These new works will cost 22 million lire, and should be completed within the next six years. When they are completed the Italian harbour system in the Adriatic will consist of Fiume, Trieste, Venice, Ravenna, Ancona, Bari and Brindisi, including extensive quayage with modern unloading and storage facilities. It should not be forgotten that this large programme may lead to competition between the various ports, taking into consideration the fact that while Venice can be considered as the sea outlet of Italian provinces, from the Brennero Pass to the Po river, Ravenna is the sea outlet for the provinces of Bologna, Modena, Mantova and certain provinces of Tuscany. Ancona, instead, is the sea outlet for the Marche and the Abruzzi regions.

According to information secured it appears that the Italian Government has approved the agreement signed between the town of Ravenna and the Italo-Roumanian Oil Company in regard to the construction of an oil bunkering station at Porto Corsini on the entrance of the Candiano Canal.



## Recent Legal Decisions

THE judgment of Scrutton L.J. in *The Edison* (1932) 48 T.L.R. 224, though necessarily having special reference to shipping property, deals with a distinction in principle which may be generally useful, in all cases where either there is partial damage or total loss. His Lordship appears to have set himself to remedy the defect that in his own words "possibly even at the present day there has been no very clear principle on which damages caused by collision are to be assessed." The facts were these. The plaintiffs' dredger while carrying out excavation work under contract with harbour commissioners, was run down and sunk. The plaintiffs, having practically exhausted their finances in providing the plant for this contract, were unable to purchase another dredger to replace the lost vessel, but after an interval of some weeks, hired a substitute at a high rate of hire and subsequently with the assistance of the harbour authority arranged for its purchase on easy terms.

In the Court of first instance Mr. Justice Langton held that the proper method of assessing the damages was not to determine what the normal dredger owner would have suffered by the loss of his dredger and then to rule out all other items of damage as too remote, but to examine what the plaintiffs actually claimed to have lost and then test each item by the plain criterion whether it was properly and necessarily incurred.

In allowing appeal against that judgment, Lord Justice Scrutton pointed out that the claims for damage to a ship by collision fall into two classes (a) where the ship was not lost but damaged so that for a time she could not be used, and (b) where the ship was totally lost. In the case of damage to a ship other than a total loss the claimant is entitled to the cost of repairing the damage, but besides that, as he is necessarily prevented from using the ship to earn profits till the damage is repaired, damages for loss of earnings is not too remote to be included in assessment, though, as was pointed out in the *Argentino* 14 Ap. Ca. 519, if damage for such loss of profits is awarded, any claim in the nature of demurrage is thereby ruled out for that would be to give the same amount twice.

In the case of total loss, however, the claimant has lost his ship, and is entitled to be paid its value at the time of loss plus interest from the time of loss till payment. The value of the ship for this purpose is not necessarily limited to market value, i.e., the price at which the vessel could be sold. The real test is (*The Harmonides* (1903) 19 T.L.R. 37) what is the value of the ship to the owners as a going concern at the time of the loss. This leaves no room for the addition of such profits as might have been made but for the loss. According to this test the value of the ship is an estimate or rough capitalization of its earning power for its life. Estimating her value in that way includes profit and accordingly an additional assessment for profits is not competent.

It may be informative if we now set out the leading heads of the plaintiff's claim of damage and see how it fared according to the principles enunciated by the learned Lord Justice.

The claim of damage consisted of the following items:—

1. The value of the dredger lost, measured by what was paid for the new vessel. It was held that this was not the true measure of value of the ship lost.
2. Expenses incurred (cost of staff and plant lying idle during period between the sinking of the dredger and the resumption with the hired vessel).—Disallowed as being too remote.
3. Cost of hiring the substitute vessel. This was admittedly incurred because the plaintiffs could not buy her right out.—Disallowed.
4. Extra cost of working the purchased ship as compared with former dredger. This was also refused, for though it might be relevant in a case of partial loss it did not apply where total loss incurred.
5. A proportion of loss of profit under the contract, also disallowed, as not being appropriate to a case of total loss.

According to the line of doctrine sustained by the Court of Appeal the test was not whether the sums laid out by the claimants subsequent to the loss had been properly and reasonably incurred, but what had they lost. And in Lord Justice Scrutton's opinion they had lost their dredger. Concurring with him, the Court of Appeal accordingly held that if they got the value of the dredger at the time and place of loss as a profit-earning vessel, along with interest on that value from the time of payment, there was no room for any further award. "Neither losses due to the existence of a contract nor extra expenses due to the owners' poverty were direct and natural consequences of the collision."

The material result consequent on the adoption of one or other of the divergent principles referred to is striking. Mr.

Justice Langton had awarded the claimants £18,820 as against a total claim of £23,514, while in the higher court the award was reduced to £9,000, half as much again as the original cost, and more than half as much again as the incurred value, which was considered "an ample measure of the dredger's value as a going concern"—with interest from the time of the loss till payment.

Another recent case settles a practical difficulty in connection with loading or discharging which though monetarily affecting the shipowners and traders may yet be usefully noted here.

A steamer was chartered to load a cargo of grain at the Plate Ports. The Charter Party provided (Clause 17) "Cargo to be brought to and taken from alongside at charterer's risk and expense," and then (Clause 18) "Charterers shall provide stevedores to load the cargo at a cost to the vessel of 25 cents gold per English ton." The charterers had the option of loading in bags, but there was no express provision on the ship to supply the use of winches. At loading ports Trade Union Regulations made the employment of shore winchmen compulsory, and the charterers paid the expense of winchmen and deducted it from the freight. In an action by the shipowners for the balance of freight, it was held that the supply by the ship of the use of winches was an implied term of charter party and the winchmen were supplied on an implied request of the Captain under his implied obligation to provide use of winches, and as the use of the winches was not part of the expense covered by Clause 18, the charterers were entitled to deduct the expense of the winchmen from the freight.

In giving judgment to the above effect, Mr. Justice McKinnon observed that "if this had been the first time on which the question had arisen, the Captain would have had to hire men outside the crew to work the winches, or otherwise the loading could not have been effected at all, but the custom was well-known by this time and rested on the ship, just as the cost of raising steam for the winches would without question fall on the shipowners."

### Quick Turn Round of Vessels at Penarth Dock.

Further instances of the quick despatch afforded to vessels at the Great Western Railway Company's Docks is evidenced by the two under-mentioned cases which occurred at Penarth Docks last week-end.

The s.s. "Corbeach," loaded for Messrs. Wm. Cory and Sons, arrived at Penarth Dock at 9.15 p.m. on Friday, February 12th, and sailed again at 10.10 a.m. the following day (Saturday, February 13th). Loading operations commenced at 9.45 p.m. on Friday and were completed at 9.45 a.m. the following day (Saturday). The following quantities of coal were taken aboard: Cargo, 2,111 tons 14 cwt.; bunkers, 50 tons; total, 2,161 tons 14 cwt. The net working time was 9½ hours, giving an average rate of shipment of 228 tons per hour.

The second case was the s.s. "Cedar Tree," which arrived at Penarth Dock at 8.50 p.m. on Friday, February 12th, and sailed the following day (Saturday) at 12.15 p.m. The vessel commenced loading operations at 10.15 p.m. on Friday and completed by 11.15 a.m. on Saturday morning. The following quantities were loaded: Cargo, 2,101 tons, 9 cwt.; bunkers, 87 tons 18 cwt.; total, 2,189 tons 7 cwt. The net loading time was 10½ hours, giving an average rate of loading of 209 tons an hour. The shippers were Messrs. Stephenson, Clarke and Co.

### Winter Tariffs on Finnish State Railways.

In recent years railway freight rates to and from the Port of Abo have been lowered during the winter months to a level of the freight rates to and from Hango in order to avoid congestion at the latter port. These tariff reductions have been decided year by year, and application for their enforcement this year was also made, but was disapproved by the Railway Administration. It was pointed out that during recent years considerable improvements have been carried out at the Port of Hango, which have appreciably increased its capacity, so that the original reason for the introduction of the reduced freight rates, viz., the avoiding of congestion at the Port of Hango, no longer exists.

The Railway Administration approved, however, reductions in the freight rates between Hango and stations situated East and North of the Riihimäki Railway Junction to a level of the rates in force for the transport of goods between these stations and Helsingfors for the period January 19th to April 15th.

These reductions were approved as it was considered that when the Port of Kotka is closed for shipping, the Port of Helsingfors will be unable to cope with the entire traffic. No reductions will consequently be allowed if the Port of Helsingfors is closed as a result of ice conditions.

## Notes from Far Eastern Ports



View showing "Mass Concrete Capping at East End of Sand Screen," Madras.

### Ceylon

#### Colombo's Foreign Trade.

WITH the publication of the December Customs Returns, just available, it is now possible to estimate the loss of the foreign trade of Ceylon through the port of Colombo in 1931.

Imports dropped nearly one-third in value, compared with 1930, and exports to a similar degree. Consequently the revenue of the Island fell considerably as a result of this decrease in trade. On import and export duties alone there was a drop of Rs.8,493,946, import duties falling by Rs.5,685,926 and export duties by Rs.2,810,028, while sundries made up for the odd Rs.2,000.

Revenue from the Colombo harbour and dues leviable at out-ports, decreased by Rs.376,872 compared with 1930.

It is interesting in view of the depreciation of trade which has gone on in Ceylon during the last few years to note the drop in imports and exports for 1929, 1930 and last year. The figures of imports for these three years are:—

1929	...	...	Rs.403,004,031
1930	...	...	Rs.302,132,857
1931	...	...	Rs.218,343,258

The best month last year for imports was January, the value of commodities brought into the Island amounting to Rs.22,267,286, but on looking back to 1929, it will be found that in no month during the year was such a small total of imports sent to the Island. The lowest figure that year was no less than 29 million rupees. In 1930 only three months recorded a lower value of imports than the best month of 1931. The total value of exports for the last three years are as follows:—

1929	...	...	Rs.422,580,648
1930	...	...	Rs.322,972,116
1931	...	...	Rs.233,128,873

As with imports the month of January was the best month for exports also, and in this connection it is interesting to note that only the last four months of 1930 were lower than the best month, 1931, while in 1929 the lowest figure was over Rs.28,500,000.

Under one of the trade headlines for December is given much cause for optimism in regard to the next few months trade, for the totals would show that during the last twelve months there has been very little rise and fall with the import and export trade of the Island. The highest figure (as stated above) was over 22 million rupees for imports and the lowest in this column was little over 15 million rupees recorded in August. The total exports rose as high as nearly 24 million rupees in January, while the lowest point reached was 16½ millions rupees in August.

During the last three months both imports and exports have remained in very much the same neighbourhood, the total for imports last month being Rs.17,830,628 and for exports Rs.18,818,849. These naturally compare very unfavourably with the totals for the corresponding months in 1930 and 1929.

Under the heading of import duties a big drop in the amount collected on kerosene oil and motor spirits is recorded. This amounts to no less than Rs.1,319,579. Spirits and cordials import duties were a half a million rupees down compared with 1929. Under the heading of export duties the only rise compared with 1930 is recorded by tea where the increase over the previous year's figures is Rs.68,887. There was a big drop on rubber duties, partly due to the lowering of the rate payable on exported rubber. The loss to the Colony's revenue under this heading amounted to Rs.1,637,129. Copra duties (largely for the same reason as that for rubber) were also down, the deficit on this year's figure being Rs.619,323. On desiccated coconut, the total was down by Rs.237,996 and on coconut oil, the deficit was Rs.307,784.

#### More Ships Use Oil in Colombo Harbour.

On an average, one ship a day was bunkered with liquid fuel in Colombo Harbour last year. This is a considerable rise against the number of ships bunkered in 1930, when the total was 331.

The amount of liquid fuel supplied to ships was also larger in 1931 than in 1930, the respective figures in tons being 192,222 and 188,766. Liquid fuel imports, however, fell from 229,834 tons in 1930 to 208,023 tons in 1931.

This probably gives an indication of the increasing adoption of oil fuel vessels by steamship companies to the exclusion of coal burners, a supposition which is borne out by the fact that the number of ships bunkered with coal in Colombo Harbour fell from 1,023 in 1930 to 962 in 1931. The amount of coal imported was 567,011 tons in 1930 and 494,269 in 1931.

#### Colombo Port Commission Matters.

At a very recent meeting of the Colombo Port Commission held in the new Customs buildings it was announced that in view of the altered conditions consequent on the introduction of the new Constitution for Ceylon, whereby all matters connected with the Railway Department are now considered by the Executive Committee of Communications and Works, it has been decided by the Government to abolish the Railway Advisory Board appointed by the Port Commission.

#### Change of Port Commission Membership.

His Excellency the Governor of Ceylon has approved of the appointment of Mr. R. W. Fowke as an unofficial member of the Colombo Port Commission representing shipping interests, *vice* Mr. R. D. Kenyon, resigned.



## Notes from Far Eastern Ports—continued

*Rise in Oil Facilities' Receipts in Colombo Harbour.*

A satisfactory feature of the year's working in the Colombo Harbour was the rise in the oil facilities receipts recorded in 1931, as compared with the previous year. The receipts last year amounted to Rs.778,386 against Rs.730,794 in 1930. On the other hand, the actual tonnage of imports and exports, excluding coal and oil, showed a marked drop during the year. The total tonnage last year was 1,700,940, as against 1,827,565 in 1930, and 2,054,002 in 1929.

*Colombo Harbour Retrenchment.*

A Sub-Committee to consider the possibilities of retrenchment and reduction of establishment charges of the Colombo Port Commission, was appointed at the last meeting of the Commission as follows:—Mr. G. S. Wodeman (Chairman) and Messrs. M. J. Cary, W. Duncan, J. A. Tarbat and E. H. Davies (Secretary).

*Improvement of Galle Harbour.*

The Galle Municipal Council has petitioned the Governor urging upon him the vital necessity of improving the Galle Harbour. So far back as in 1892 a movement was afoot under the leadership of the late Dr. D. P. Anthonisz to secure the improvement of the Galle Harbour. Prominent European merchants, including the late Messrs. C. P. Hayley, E. C. Oates, T. S. Clark and R. L. Syms associated themselves with the movement which went to the extent of requesting the Government to construct a breakwater in Galle.

A memorial was presented to the then Secretary of State for the Colonies, the Marquess of Ripon, on the subject. In response to this memorial, the Secretary of State sanctioned the inclusion of a sum of Rs.10,000 in the estimates of 1893 for the purpose of removing obstructions in the anchorage, but considered the proposal for the construction of a breakwater one of difficulty and was not prepared to encourage hopes that the work could be undertaken. Since then various improvements have been effected from time to time, the last occasion being in 1929 when a scheme for re-building the three jetties was completed.

Of late trade in the port has considerably increased and more vessels are calling at Galle. But vessels other than cargo boats plying between Ceylon and Indian Ports seldom touch here. Up to a year ago, cargo boats that had small consignments of rice, sugar and other commodities from local importers did not touch at Galle, but unloaded their cargo at Colombo from where importers had to re-transfer their goods to Galle by overland route. This meant extra expense, but now boats with a cargo of even 2,000 bags of rice for local importers touch at Galle.

With further improvements to the harbour it is expected to induce more and better vessels to call at the Port of Galle, as Galle is supposed to have vast possibilities both in export and import trade.

*Calcutta**Foreign Trade of Calcutta.*

A decline in the trade of the Port of Calcutta is revealed by the shipping figures just published by the Port Trust Commissioners covering the period from April to November. Compared with the statistics for November for the two previous years, the number of ships entering the Port dropped from 125 in 1929 and 193 in 1930, to 98 in 1931, and of these, foreign vessels dropped from 80 in 1929 to 61 last year. Expressed in tonnage, the fall in foreign vessels was from 297,688 in 1929 and 244,152 in 1930, to 231,609 last year, while the total tonnage fell from 424,572 in 1929 and 351,329 in 1930, to 334,121 last year.

In clearances also there was a decline, although not so marked, for whereas the figure stood at 117 in 1929, it was 114 in 1931, showing immediately a slight rise of five ships over November, 1930. The tonnage, however, was lower by 520,000 than in 1929 and 149,000 than in 1930. Taking now the figure for the eight months from April to November, the report shows that the ships which entered and left the Port numbered 2,052 in 1929, 1,776 in 1930, and 1,711 in 1931, with a total tonnage, respectively, of 6,764,833 tons, 5,952,117 tons, and 5,651,778 tons.

Dealing with figures of the goods actually handled, the report shows that the imports during November of last year fell from 294,669 tons in 1929 and 204,660 tons in 1930, to 178,051 tons in 1931, while the exports for the same period showed a steady decline from 653,931 tons to 533,334 tons, and then again to 528,608 tons. The total of produce actually dealt with, therefore, was 948,600 tons in 1929, 737,994 tons in 1930, and 706,659 tons last year.

The combined action of the economic disruption and the political turmoil has been marked throughout the whole period

from April to November, as is shown by the following figures of total imports and exports:—7,403,147 tons in 1929; 5,898,280 tons in 1930, and 5,304,043 tons in 1931.

*Imports and Exports through the Port of Calcutta.*

A study of the statistics about the various commodities imported into Calcutta reveals interesting facts. For example, during the eight months under review, there were imported 321,342 tons of salt, 260,777 tons of petroleum, 179,058 tons of wheat and seeds, 175,856 tons of rice, 126,838 tons of sugar 51,928 tons of cotton piece goods, 28,450 tons of machinery, 27,340 tons of betel nuts and 4,169 tons of beer.

On the export side for the same period some of the most interesting figures are:—1,800,906 tons of coal, 515,758 tons of quinine, 374,816 tons of jute, 223,108 tons of pig iron, 102,809 tons of manganese ore, 78,960 tons of tea and 62,872 tons of rice.

*Siam**Bangkok's Foreign Trade.*

Siam's favourable trade balance is being maintained despite the hard times and the export of rice in quantity continues to exceed the export for 1930, according to the monthly Customs Returns for December, just issued.

Imports totalled Tcs.7,281,288 for the Port of Bangkok and exports reached Tcs.7,838,062 during December, while in the provincial ports imports totalled Tcs.662,518 against exports of Tcs.1,562,220.

Imports of general merchandise dropped from Tcs.10,373,582 in 1930 to Tcs.6,676,789 last December. Imports of wine, beer and spirits dropped from Tcs.253,021 to Tcs.93,132.

In December 1,966,140 piculs of rice were exported as compared with 1,393,341 the previous year. The low price, however, made the value of the December rice exports Tcs.6,259,361 as against Tcs.7,906,060 received for the exports in 1930.

Teak exports dropped from Tcs.658,955 in 1930 to Tcs.363,829 last year. Other goods exported amounted to Tcs.1,271,277 against Tcs.1,972,497 for 1930.

The total imports for the three months ending last December were Tcs.70,882,075, against exports for the period totalling Tcs.77,317,527.

Tin ore exported from the provincial ports totalled Tcs.1,065,696 against Tcs.1,217,781 for the previous year during December. Rubber exports from these ports totalled Tcs.38,968 as against Tcs.62,199 for the previous year. Other goods exported dropped from Tcs.523,761 last year to Tcs.331,152 this year for January.

*Miscellaneous.*

Some indication of the falling off in the maritime trade of the world is given by the figures just published by the Colombo Port Commission regarding the amount of traffic cleared in the Harbour during 1931. The number of vessels entering the port during the last three years has steadily dropped, although the total is not sufficient to cause alarm. Last year 2,877 vessels called at Colombo, against 2,944 in 1930 and 3,204 in 1929.

The total export of rice through the Port of Rangoon from 1st January to 25th December, 1931, aggregated 3,498,124 tons, against 3,421,574 tons for the corresponding period of 1930. Out of these exports India took 1,367,942 tons in 1931, and 853,249 tons in 1930.

The total export of rice and rice products through the Port of Bangkok for the period January 1st to December 31st, 1931, were 1,231,764 tons, as compared with 1,027,747 tons in the same period last year according to a statement from the Principal Collector of Customs, Bangkok.

*Port Works in Spain*

The Commercial Secretary to H.M. Embassy at Madrid reports that the "Madrid Gazette" of the 29th January publishes various calls for tenders in connection with port works which, although at present only open to national firms, may eventually be of interest to United Kingdom contractors. Foreign firms may yet be invited to participate if the results of the first calls for tenders from Spanish firms are not satisfactory.

The works in question are:—

Sancti-Petri (Prov. of Cadiz).—Improvement works on the bar in the channel, estimated cost, Ptas. 2,483,981.81.

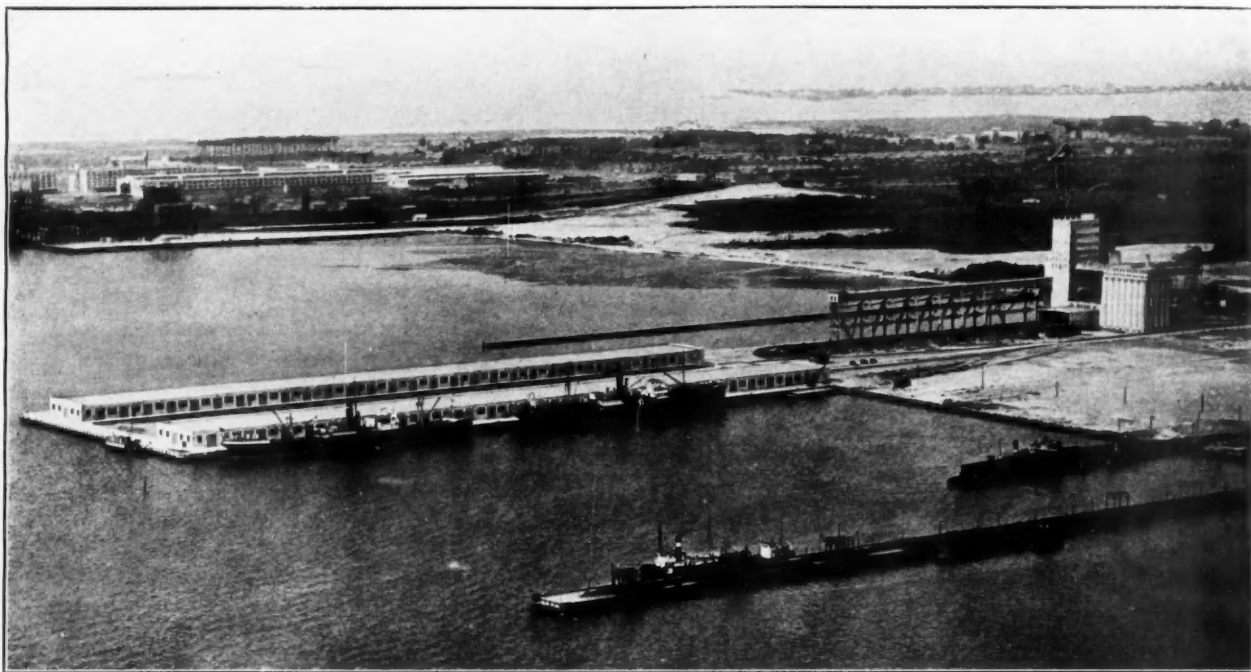
Bilbao (Outer Port).—Construction of a dock, estimated cost, Ptas. 5,882,745.99.

Santurce (Vizcaya).—Port Works, estimated cost, Ptas. 3,587,065.84.

Ciudadela (Balearic Islands).—Dredging and removal of rocks, estimated cost, Ptas. 293,827.80.



## *The Port of Norfolk, Virginia, U.S.A.*



*Grain Elevator and Municipal Piers, Norfolk, Va. Foreground shows Fuel Oil Pier of Standard Oil Company.*



*General View of Norfolk Tidewater Terminals from the Air.*

## The Port of Norfolk, Virginia, U.S.A.

### Commercial Development.

THE site of Norfolk, with its wonderful ice-free harbour and its nearness to the ocean, from the earliest days of the American Colonies, has been marked by students of economic geography as a spot designed by nature to be one of the world's greatest ports.

Back of and naturally tributary to this port is that bank of States formerly composing the great North-western Territory which once belonged to the State of Virginia, and which was ceded by Virginia to the United States Government in order to mollify the sensitiveness of her northern neighbours. Out of this territory were created the States of Kentucky, Ohio, Indiana, Illinois, and parts of others.



Shipping Wood Pulp at the Norfolk Tidewater Terminals, Norfolk, Va.

When one considers the possibilities for the development of this territory and the movement of its trade through Virginia's gateway, one is led to wonder why Norfolk to-day is not the largest city on the Atlantic Coast.

Matthew Fontaine Maury, the great geographer, was not the first deep student to perceive the potentialities of the port, but his opinion is worth recording because his is recognized as a voice of authority. In an official survey, Maury envisioned these States as tributary to the port of Hampton Roads, on which Norfolk is situated. He declared that their transportation system should draw through Hampton Roads to Europe, and he demonstrated on a chart that the route through Norfolk places this territory nearer to Europe than any other route through the northern ports.

In view of the city's giant strides of the last twenty years, the circumstances which in times past retarded her growth are at this time particularly interesting.

Norfolk had her real beginning on June 8th, 1680, when the Virginia Assembly passed an Act authorizing the purchase of fifty acres of land to form the town. The purchase was made on August 16th of the same year, from Nicholas Wise, a carpenter, and the price paid was ten thousand pounds of tobacco—for tobacco at that time passed current for money in Virginia.

Norfolk became a full-fledged town in 1705, and by 1728 was coming into its own as a port.

Up to the time of the Revolutionary War, Norfolk was, in fact, maintaining a leading position in the foreign commerce of the United States. The city was then importing from the West Indies, South America, and Europe, and exporting to the same countries and others.

Seven years after the war, Norfolk was fast regaining its former position as a port. Then, of course, there were no railroads, and better means of transportation became necessary. The Dismal Swamp Canal was commenced in 1787 to form a more direct highway between the navigable waters of the States of Virginia and North Carolina. It was finally opened for navigation in 1828.

That was the first line of transportation. Later the Albermarle and Chesapeake Canal was built, and it is now operated by the Government as a part of the inland waterways system.

Work on the first railroad, the Portsmouth and Roanoke, was started in 1835. Norfolk citizens subscribed to the stock, and Portsmouth and the State of Virginia also contributed. The road was completed at the time, only to Weldon, then foreclosed, and bought by the State.

During this critical period, the port of Norfolk failed to develop in keeping with its natural facilities, for the want of adequate connections with the interior. It had only the two small canals, and nothing else.

The Baltimore and Ohio Railroad had been chartered in 1827, and was an active factor in building up the business of Baltimore. The Erie Canal was also completed and paying dividends long before the Civil War. The State of Virginia had started work on the James River Canal, but the war interrupted.

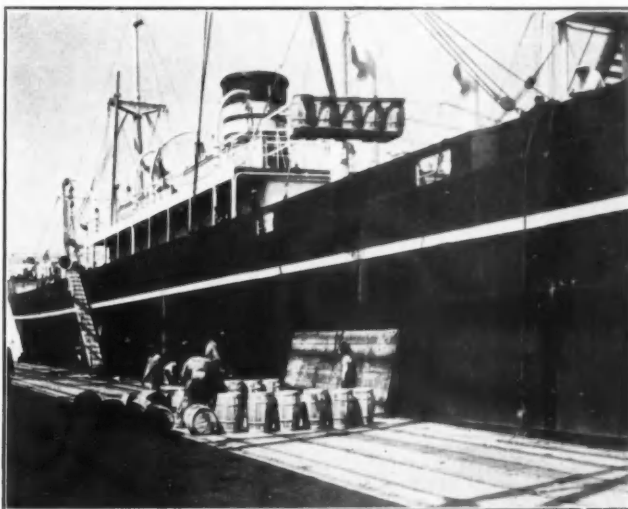
At the beginning of the Civil War, to be sure, the road from Portsmouth to Weldon had been completed, and just before 1859 there was constructed a railway from Norfolk to Petersburg. When the Civil War was over, the first of these had been worn out. The Federals had taken possession of Norfolk and had removed all the steel off the Norfolk end, while the Confederates had taken it off the Petersburg end. The ties had rotted and there was nothing there but the right of way.

The northern ports, having been open throughout the war, had forged ahead. The Erie Canal first made New York, and then the city got its railroads to enable it to maintain the advantage. Industries naturally began to establish themselves along the railroads serving the northern ports, and commercial habits were established which it has been exceedingly difficult to break.

Conditions at Norfolk remained almost dormant until 1870, when the Norfolk and Virginia Railroad, the Southern Railroad, and the Tennessee and Virginia Railroad were organized into what was called the Atlantic, Mississippi and Ohio Railroad. Then Norfolk began to get a little business. All this business and trackage was taken over several years later by the Norfolk and Western Railway.

There was then no fuel on Hampton Roads, no commerce and no improvements. The commerce of the early days had gradually been taken to the ports having better facilities for distribution. The Norfolk and Western, in the course of events, built from Radford, up in the coal fields, and brought in the first car of coal in 1883. That was the beginning of the traffic that has made modern Norfolk the world's greatest coal port.

As late as 1886, the city of Norfolk entered into negotiations with the Atlantic Coast Line and the old Richmond and Danville Railroad to build in to Norfolk. The buildings of a road that is now a part of the Coast Line system resulted.



Apples from Shenandoah Valley, Va., for Export.

About the same time the Southern Railway was spending three or four million dollars in an effort to establish a port at West Point, on the York River. The railway operated to its terminals there for some years until it became convinced of its mistake, and made a trackage arrangement over the Atlantic Coast Line whereby it could use the port of Norfolk. Terminals were built adjoining the Coast Line warehouses and piers. Later the Southern obtained possession of trackage arrangement over the Atlantic Coast Line whereby it could use the port of Norfolk. Terminals were built adjoining the Coast Line warehouses and piers. Later the Southern obtained possession of trackage connecting with its main line at Danville.

The Norfolk Southern was built comparatively recently down the bank of the Dismal Swamp Canal to points in North Carolina, and now has 1,000 miles of trackage. The Pennsylvania Railroad built down the Eastern Shore peninsula of



*The Port of Norfolk, Virginia, U.S.A.—continued*

Virginia in 1884, and established boat and barge connection between Cape Charles and Norfolk.

The Virginian Railway completed its fine coal-carrying road to Norfolk in 1907, after the City Council had agreed to donate a sum sufficient to purchase seven miles of right of way to Sewall's Point, where the dumping piers were to be built. These terminals are in territory which was recently taken into the city limits by annexation.

Thus, it can be seen that Norfolk's failure to develop in keeping with reasonable expectations was due almost entirely to an early lack of adequate inland transportation facilities, while rival ports were more fortunate in this respect. One reason for this, as has already been intimated, was the development of Virginia and her southern neighbours almost exclusively along agricultural lines, and the feasibility of shipping directly from the farms, while vessels were of small draft.

Growth up to 1870, in short, was practically negligible. Norfolk then had a population of 19,229, about half of which were negroes. It has grown since that time because of, and to the extent of, its increasing railroad facilities. The population by 1880 had increased to 21,966; by 1890, to 34,871; by 1900, to 46,624; by 1910, to 67,452; and by 1920, to 115,777. The U.S. census of 1930 gives Norfolk a population of 129,710.

The story of Norfolk's rapid rise in the export field in recent years is a story of grit and determination on the part of her own citizens, together with the example of the World War, when Norfolk was utilized so extensively for the shipment of army supplies overseas, and became one of the world's largest naval bases.

Before recounting these achievements, however, it would be well to outline the development of the Norfolk and Portsmouth Belt Line Railroad, which has been declared by experts to be one of the greatest assets possessed by any port or industrial city.

The story of the Belt Line begins with the building of the Pennsylvania Railroad down the Eastern Shore peninsula. Before 1881, there was but one gateway for passenger and freight service between the North and South, and that was by way of Baltimore and Washington.

The year before, A. J. Cassatt, then a director of the Pennsylvania Railroad, had bought the stocks of the old Eastern Shore Railroad, extending from Delmar, Delaware, then the southern end of the Pennsylvania, to King's Creek and Crisfield. He also had purchased the stock of the Peninsular Railroad, which ran to the north shore of the Pocomoke river, opposite Pocomoke City, Md.

In the fall of 1883, Mr. Cassatt had commenced the construction of the New York, Philadelphia and Norfolk Railroad, from Pocomoke City to Cape Charles City, and the rebuilding of the old Eastern Shore and Peninsular railroads. These roads were completed in November, 1884, and began handling passengers and freight to Norfolk.

This made the second gateway between the North and South. For a number of years the barges of the New York, Philadelphia and Norfolk Railroad landed for loading and unloading at the different car float bridges of the Norfolk railroads, and were unloaded and loaded by engines and crews of the Norfolk railroads. This method caused delays in the movement of the floating equipment of the N.Y.P. and N. Railroad.

In 1896, Mr. Cassatt conceived the idea of building a terminal where all freight cars for his road could be assembled and where the barges could be loaded and unloaded by the New York, Philadelphia and Norfolk road's engines and crews.

Surveys for this terminal, as well as the Norfolk and Portsmouth Belt Line Railroad (then known as the South-eastern and Atlantic Railroad), were started in June, 1896, and both were completed in 1898.

The Belt Line was so located and constructed as to give a physical connection with the New York, Philadelphia and Norfolk Railroad, and all the railroads having their terminals at Norfolk, Portsmouth and vicinity, which were: Seaboard and Roanoke (now Seaboard Air Line Railway), Norfolk and Southern (now Norfolk Southern Railroad), Norfolk and Western Railway, Atlantic and Danville Railway (now leased by Southern Railway), Southern Railway, Norfolk and Carolina Railroad (now the Atlantic Coast Line), and the Chesapeake and Ohio Railway, whose connection with the Belt Line was through the New York, Philadelphia and Norfolk Railroad's yard at Port Norfolk until December, 1922. During the latter month the Belt Line completed a float bridge at Sewall's Point, which gave the Chesapeake and Ohio a direct connection.

Mr. Cassatt purchased the right of way for and financed the construction of the Belt Line. When it was completed he turned over to each of the railroads named an eighth interest without any profit. In 1915, the Virginian Railway, which had been constructed several years earlier, purchased an equal interest.

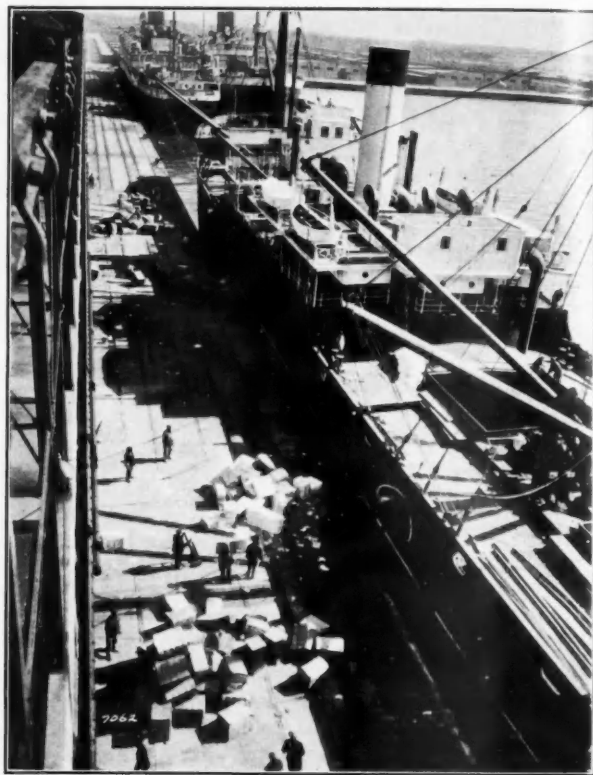
The Belt Line started operations with two small locomotives and now owns twenty, most of them having twice as much tractive efforts as the original engines.

The original purpose for which the Belt Line was constructed was to assemble freight north-bound and south-bound by way of the New York, Philadelphia and Norfolk Railroad at a common point to facilitate the movement across the Bay to and from Cape Charles City. It was only later that the wonderful possibilities of the line in building up industrial operations and stimulating overseas commerce were fully recognized.

The initial agreement between the roads owning the Belt Line provided that the rates to and from points on the line should not exceed the rates to and from Norfolk and Portsmouth. This arrangement acted as a powerful agency for attracting industries to locate in the section. At the present time, the Belt Line serves 116 different industries and sidings.

In order to take advantage of the commercial opportunities offered by the Belt Line, it was seen that there should be created modern municipal overseas terminals open on equal terms to all steamship lines, and with free switching service from all the railroad lines coming into port. The roads owning the Belt Line absorb all charges from shifting one to the other.

With this ambition in view, the city of Norfolk in 1916 purchased about 120 acres of land near Sewall's Point, with 2,400-ft. of frontage on the Elizabeth River, and made plans for building a pier and warehouses.



*Unloading Wood Pulp at Norfolk Tidewater Terminals, Norfolk, Va.*

The United States entered the World War in April, 1917, at which time work on the terminals was already in progress. The War Department, recognizing the paramount advantages offered by Norfolk as a base for storage and shipment of supplies to the army overseas, proposed to the city to take over the terminal property for the construction of a quartermaster's supply station in exchange for another equivalent area nearby with about an equivalent frontage on the river. This was consummated, and piers, warehouses and classification yards were built by the Government at a cost of about \$30,000,000. The Belt Line was, of course, extended to these terminals.

As soon as practicable after the war the development of terminals was again taken up by the city. The army base, now no longer needed for war activities, offered the very facilities that had been needed, and as a consequence the city effected a lease on them.

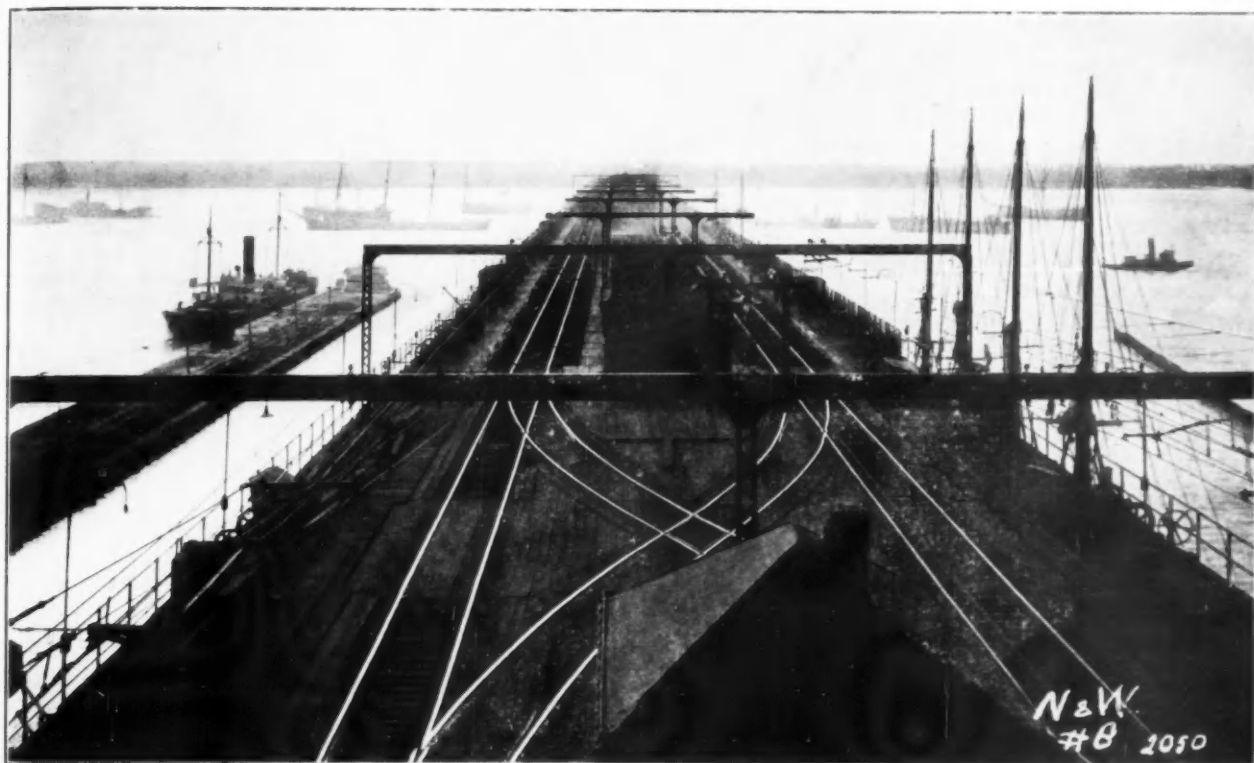
In order to have an agency for operating its newly-acquired terminals, the city formed a port commission as an official body to develop foreign commerce. The army supply base under that lease was successfully operated for some years.

A large and rapidly-increasing business was developed for the port. The principal commodities for export were cotton and tobacco, with many other articles moving in smaller quantities.

It soon became evident, however, that dependable steamship service with regular sailings was absolutely necessary to a port in competition with the northern trade centres; and that under



## *The Port of Norfolk, Virginia, U.S.A.*



*Gigantic Norfolk and Western Railway Coal Pier at Norfolk, Va. Norfolk is the World's Greatest Coal Pier.*



*Lard for Export, from Car to Ship, at Norfolk Tidewater Terminals.*

*The Port of Norfolk, Virginia, U.S.A.—continued*

the existing conditions, neither the railroads nor the port commission could secure shipments of a great many of the leading importers and exporters whose business was flowing through the northern ports.

To secure more steamship lines and regularity of sailings, it was necessary that the ships should have what is called a balanced cargo—that is, some heavy weight. It became plain that this difficulty might be met by the erection of a modern elevator that could handle grain, to supplement the lighter cotton and tobacco. Plans in the meantime were also going forward for the construction of a municipal terminal on the city's own property, for use when the Government should see fit to take back the army base.

As soon as it had been demonstrated that the need of grain was essential for the port's future, a campaign was begun for making the elevator a reality. A bond issue of \$5,000,000 to build the elevator and a municipal pier and warehouse was proposed. Opponents of the measure stipulated that the grain elevator ought to be leased and not operated by the city, but all quarters were satisfied about the rest of the proposed terminal, because the port commission was then successfully operating the army supply base. The elevator was completed in 1923.

The army base terminals and the new city pier were leased in the summer of 1925 by the Norfolk Tidewater Terminals, Inc., a subsidiary of the chain of terminals of which Harvey C. Miller, of Philadelphia, is president. The City Port Commission at that time retired from their operation, and the lessees are now developing the business on a larger scale than has even been possible before. The grain elevator was not involved in the lease.



*From Ship to Car, at Norfolk, Va. Nitrates from South America.*

During 1928, the City of Norfolk leased the grain elevator and all the municipal piers to the Norfolk and Western Railway. The piers and elevator are now being operated by the Norfolk and Western Railway.

The remarkable growth of Norfolk's port business during the last several years, which has attracted widespread attention, has been the result of these progressive measures. Within the last decade the volume of export traffic has increased more than ten times, while the amount of imports has doubled.

In 1918 the City Government of Norfolk was completely reorganized and the commission—city manager—form was adopted. Under this administration the \$5,000,000 was expended on the municipal port terminal and grain elevator; \$6,000,000 on a new water supply system that practically eliminates the possibility of a shortage; between \$3,000,000 and \$4,000,000 on new and modern street improvements; \$500,000 on a modern city market, and several millions more for general improvements to the police and fire departments and to other governmental facilities.

Hampton Roads proper, the greater part of which is Norfolk's natural harbour, has an area of forty-one square miles, with extensive frontage having access to deep water. The natural configuration of the shore line, accommodating as it does a number of branching estuaries, has operated to stimulate the development of terminal projects by many and varied interests, and has obviated the necessity for crowded terminal development within a restricted zone.

**Warehouses and Terminals.**

The railroad terminal developments at Norfolk are of the "fan" or "head-in" type. In other words, the railroad approaches the waterfront at right angles, fans out into terminal yards, and tracks extend directly on to the piers,

which have been built out toward deep water at some favourable point.

It is commonly the case at other ports that railroad rights-of-way parallel the waterfront in such a way as to exclude other interests from its use. Under such type of development not only is the waterfront likely to be wastefully occupied, but the railroad itself is frequently handicapped by reason of restricted yard area and the use of quays instead of piers, or by longer handling from cars to shipside in case piers are used.

The waterfront of Norfolk-Portsmouth Harbour approximately 50 statute miles in length, all located along improved channels, or along natural channels, continuations of the improved, upon which harbour lines have been established, and which are being used for industrial purposes.

The people of Hampton Roads cities have in the last decade, by their progressive efforts, created a port condition that has resulted in manifold increase in foreign trade. The result is that, to-day, with more than ample terminal facilities, unexcelled rail transportation, general cargo service to every quarter of the globe, and a geographic situation excelled by no port on the American Continent, Hampton Roads has become one of the vital factors in the commerce of this country.

The eight trunk line railroads which centre at the port have excellent terminal facilities, which include the most modern coal piers in the world, as well as merchandise piers and storage warehouses.

**The Belt Line.**

All eight railroads are linked on the Norfolk side by the Norfolk and Portsmouth Belt Line, owned jointly by the eight roads, and declared by transportation experts to be one of the most valuable assets possessed by any port or city in the country. It provides for efficient interchange of traffic from one road to another, serves industries and commercial establishments and connects with steamship terminals. It serves directly Norfolk's municipal piers, and the municipal grain elevator now under lease to the Norfolk and Western Railway. It also serves the Army Base Piers operated by the Norfolk Tidewater Terminals, Inc.

On all through and line-haul traffic, the switching charges of the Belt Line are absorbed in the Norfolk rate.

**Railroad Service.**

The eight railroads entering Norfolk are: Atlantic Coast Line, from Norfolk to the South and South-east, traversing the cotton and tobacco-growing States, as well as the lumber-producing areas of that territory.

Chesapeake and Ohio Railway (recently taken into the Van Sweringen system, with the Erie, the Nickel Plate and other roads), with main terminals at Newport News, and with a terminal also in Norfolk connected by ferry service across Hampton Roads. This road traverses Virginia, West Virginia, Ohio, Kentucky, with termini at Chicago, and Cleveland and with connections to the Middle West, and is a feeder from the coal fields, manufacturing and agricultural areas.

Norfolk and Western Railway, to the Middle West, with connections to the South and South-west, serving the bituminous coal fields of Virginia and West Virginia, the agricultural and manufacturing areas, and connecting with the big western railroads in every direction.

Norfolk Southern Railroad, serving eastern and central North Carolina, with their great tobacco, cotton and lumber areas.

Pennsylvania Railroad, operating into Norfolk by passenger steamers and car floats, connecting directly with the North and North-east, as well as the North-west. This road recently constructed a new terminal on the shore of Chesapeake Bay to expedite movement of traffic to Cape Charles, where its most southerly rail line from New York and Philadelphia terminates.

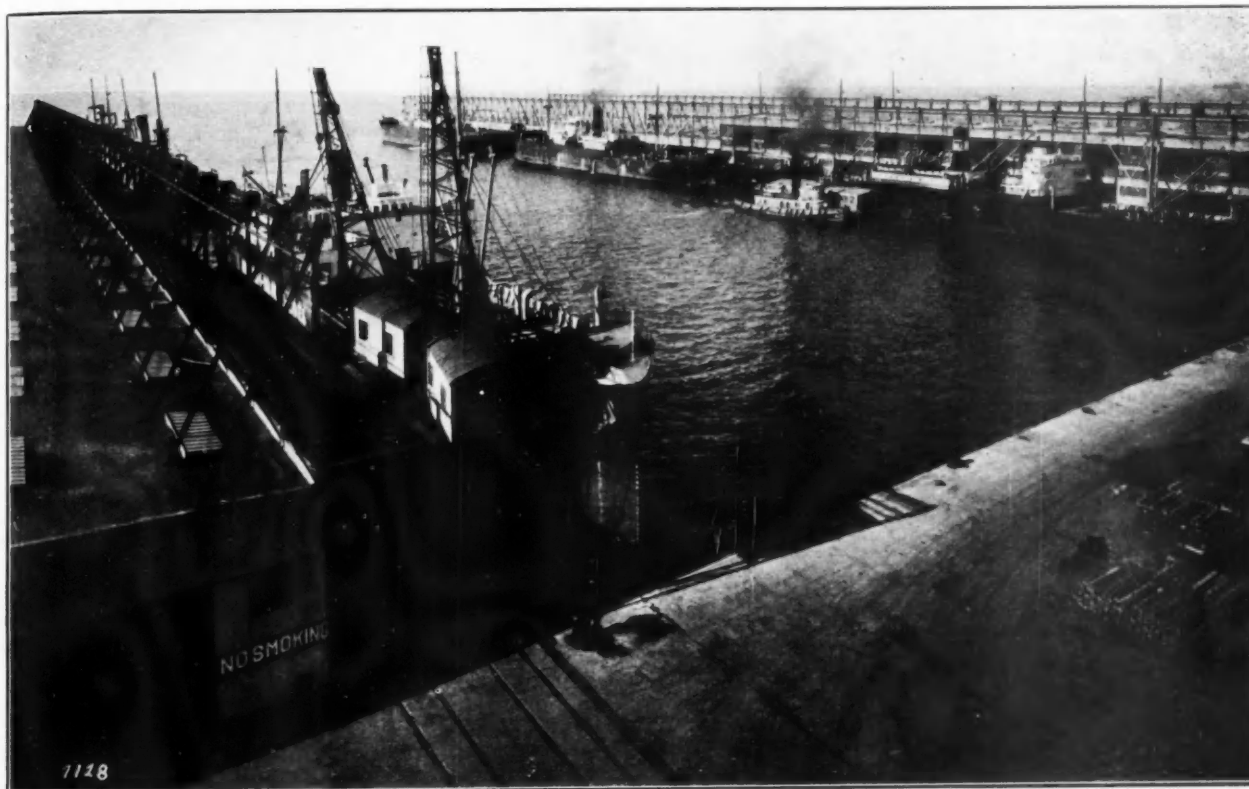
Seaboard Air Line Railway, to the South, South-east and South-west, serving the port from the cotton, tobacco and lumber-producing fields.

Southern Railway, to the Southern part of Virginia, and connecting with the greater system which traverses the manufacturing and agricultural areas of the South.

Virginian Railway, serving the bituminous coal fields of Virginia and West Virginia, as well as the agricultural and industrial territory along its line, and connecting with western railroads, thus providing a third artery of traffic from the West.

In recent years the Norfolk and Western, Chesapeake and Ohio and Virginian roads have spent millions on the development of terminal facilities along modern lines. The Virginian, early in 1925, completed a second coal pier at a cost of more than \$3,000,000, more than doubling its facilities for this commodity. The Norfolk and Western has electrified its old coal piers, increasing its capacity for handling fuel, whilst

## *The Port of Norfolk, Virginia, U.S.A.*



*A Busy Day at Norfolk Tidewater Terminals, Norfolk, Va.*



*Shenandoah Apples for Export.*



*The Port of Norfolk, Virginia, U.S.A.—continued*

other extensive improvements have also been made. The Chesapeake and Ohio has enlarged its merchandise-handling facilities and storage capacity at Newport News, and plans have been drawn for an additional coal pier.

**Steamship Lines.**

From a total of one thousand ships in foreign trade entering and clearing the port of Hampton Roads in 1914, the movement grew to 3,100 in 1924, according to figures of the United States Custom House. This figure was even further increased in 1925.

Approximately fifty steamship lines, both American and foreign, including one home-owned line, regularly serve the port of Hampton Roads—a far greater number than before the World War. These lines have ships sailing the seven seas—between the Atlantic Coast and the Pacific, as well as to the Far East. Two of the lines have passenger service to the United Kingdom and Central European ports. It has been demonstrated that the possibilities of securing favourable rates and service in the intercoastal and Far Eastern trade offer advantages that cannot be over-estimated. Of the ships carrying exports out of Hampton Roads, nearly seventy-five per cent. of cargoes are destined for European ports; twenty-one per cent. go to the Far East; and seven per cent. to Canada.

Also of vital importance as feeders to Hampton Roads are the coastwise and river steamship lines operating in and out of Norfolk, Newport News and Portsmouth, and connecting the port with the North Atlantic, and with Maryland, Virginia and North Carolina points.

The modern export, import and merchandise terminals are divided with respect to ownership into three principal groups, viz: Railroad and steamship, municipal and independent.

By the use of the term "steamship terminals," reference is made to those owned or operated by coastwise, bay and river lines only, and not overseas steamship lines. In the case of the latter, owing to peculiar local conditions and the encouragement given to the establishment and maintenance of such services, and the fact that no wharfage charge is assessed against the vessels, these lines do not maintain or lease terminals. They make use of the facilities of the railroads, the terminals of the municipality of Norfolk or such independent terminals as are engaged in handling export and import cargoes.

The railroad and steamship terminals include a total of seven open and 41 covered piers with a capacity of 2,813 cars on their tracks; 3,090,351 square feet of covered warehouse space; berthing capacity for 115 ships, and 417.5 miles of trackage.

Municipal (terminals leased) and publicly-owned terminals aggregate nine open and 6 covered piers with a capacity of 1,280 cars on their tracks; 3,427,000 square feet of covered warehouse space; berthing capacity for 25 ships, and 62 miles of trackage.

Independent terminals have two open and 16 covered piers; capacity on tracks for 1,455 cars; 4,566,802 square feet of covered warehouse space; and berthing capacity for 20 ships.

The Pennsylvania Railroad has additional terminal facilities at Little Creek, in the lower Chesapeake Bay, between Ocean View and Lynnhaven Inlet, constructed during the past two years, at a cost of several million dollars.

Total Hampton Roads Tonnages and Values—Foreign and Domestic Commerce.  
From U.S. Engineers' Report.

Year	Tonnage	Value
1921	15,479,049	\$562,855,392
1922	17,569,375	590,068,600
1923	18,900,896	811,429,278
1924	19,991,846	753,386,943
1925	23,227,910	892,959,055
1926	31,945,281	927,059,446
1927	24,783,580	895,756,851
1928	23,179,368	916,346,434
1929	25,116,481	934,906,546
Norfolk only.		
1900	5,538,051	219,662,236
1929	16,552,892	816,298,165

**Navy Yard.**

The Norfolk Navy Yard has an area of 362 acres measured to the pierhead line. Of this, 282 acres are land and 80 acres water. The St. Helena reservation across the Elizabeth River has, in addition, 91 acres, of which 63 acres are hard land and 28 acres are water. This makes a total of 453 acres, comparing as follows with other principal yards:—Portsmouth, N.H., 208 acres; Boston, 124 acres; New York, 199 acres; Philadelphia, 1,058 acres (including 135 of new fill, about one-fourth hard land, two-thirds marsh and the rest water); Charleston, 1,193 acres; Mare Island, Cal., 1,565 acres; Puget Sound, 387 acres.

The Norfolk yard has 212 buildings, with a total floor space of about 50 acres. The Norfolk yard has 30 berths on the Navy Yard side of the river, totalling more than 9,000-ft., nearly two miles. All this distance has 30-ft. depth of water alongside, and two-thirds of it has 35-ft. or more.

Nearly a quarter of all the naval dry docks in continental United States and a third of those on the Atlantic Seaboard are situated at the Norfolk yard. No other United States Navy Yard anywhere else has so many. There are six of them, ranging from 1,011-ft. to 324-ft. in length and from 40-ft. 3-in. depth of water (mean high water to keel blocks) in the case of the long dock to 15-ft. 10-in. in the case of one of the short ones.

Portsmouth, N.H., has a single dock of about the same dimensions as the second largest at Norfolk. Boston has three docks, of which the largest is slightly greater than the large one at Norfolk, but while Navy-owned, it is not at the Boston Navy Yard, and is hence remote from large ships.

New York has four, none of which approaches the Norfolk dock in size; Philadelphia, three, one of which matches the largest at Norfolk; Charleston one, of about the average size of the six Norfolk docks; Mare Island two, rating about with the second largest at Norfolk, and one comparing with the Norfolk average size. Puget Sound has three dry docks, two of them comparing approximately with the second largest Norfolk dock. The third is longer, but has a depth of water only equal to that of the two smallest Norfolk docks. Only two yards of those named, besides Norfolk, have dry docks with sufficient depth of water to have taken the U.S. S. "Orion" in the crippled condition in which she came into Norfolk on the night of December 2nd, 1925.

On several occasions the U.S.S. "Saratoga" and the U.S.S. "Lexington" came into Hampton Roads and navigated the 40-ft. channel to the Norfolk Navy Yard under their own steam, without the aid of tugs. They made the turns without difficulty, with plenty of room to spare. The "Saratoga" and the "Lexington" are two of the largest ships afloat. Both ships are 888-ft. in length, have a beam of 106-ft., and carry a crew of 2,000 men and 125 airplanes. Each ship has a displacement tonnage of 41,000, and together they represent an investment of \$60,000,000. The s.s. "George Washington" also came in and was taken to the Navy Yard under her own steam, without tug aid.

**Ship Repairs—Miscellaneous Service.**

Norfolk as a port is equipped with all the necessary facilities to serve the shipping trade. At Norfolk will be found docks, ship repair yards and shipbuilding plants, equipped to handle any job from a rowboat to a ship in the Leviathan Class. This complete service at Norfolk provides for ship operators' complete ship repair service, including under-water work on ships 8,000 tons gross and less, and machinery and hull work where drydocking is not necessary.

As a supply base Norfolk is second to no other port in the world. Norfolk is a large trading centre and also is one of the principal distributing points in the United States. As a result of its varied industries, supplies of all sorts are available in bulk quantities.

**Fuel—Coal.**

Hampton Roads ranks as the world's leading coal port. An average of approximately 20 million tons of coal each year is dumped at Hampton Roads for export, coastwise and bunker purposes. The Norfolk piers alone annually dump 12 million tons or more.

The reasonable cost for steaming coal and the unsurpassed quality of such coal at Norfolk induces many ship operators to designate Norfolk as the bunkering port. The strategic location of Norfolk is a prime factor in the position occupied by Norfolk in the bunkering trade. The modern facilities at Norfolk for coaling ships insure economy and facilitate dispatch. The availability of vast high-grade coal deposits with fast rail service guarantees an unlimited supply of coal for exporters and coastwise shippers.

All coal piers are electrically operated and have a combined hourly handling capacity of more than 20,000 tons. The piers are supported by storage yards with trackage space for 10,000 cars.

**Oil.**

Norfolk is rapidly forging to the front as a great oil bunkering port. This in a measure is due to the fact that Norfolk has been recognised by the large oil companies as a logical commercial oil distributing centre for the inland points in Virginia, North Carolina and other states. There is ample fuel oil in storage at Norfolk to supply many fleets of oil burning ships. Actually there are storage facilities for more than 10 million barrels of oil. Ships may be bunkered by barges or at the piers.

## Notes from the North

### Caernarvon Harbour Trust.

TO a recent meeting of the Caernarvon Harbour Trust it was stated that during December 2,054 tons of slate were shipped from Caernarvon, against 593 tons for the corresponding month in 1930, an increase of 1,461 tons. During October, November and December the total tonnage shipped was 6,356, an increase of 3,446 tons on the corresponding three months in 1930.

### Cheapening Port Charges.

Since the reduction of dockers' wages, steamers discharging at the Mersey Docks and Harbour Board grain warehouses have received the benefit of the reduction of 7½ per cent. on discharging rates and master portage charges. It was objected at the meeting of the Liverpool Chamber of Commerce that steamers going direct to the mills, where they had wharfage accommodation, had not been so treated. Mr. A. Coker said a reduction in dockers' wages should go into the industry, and it was unreasonable that a miller who did his own stevedoring should take advantage of a reduction of dockers' wages instead of passing it on to the proper quarter. If such a principle were extended, Liverpool would become an outrageously dear port. The matter is engaging the attention of the Transport Committee of the Liverpool Chamber of Commerce.

### Mersey Fog Signalling Devices.

The Earl of Elgin, who is chairman of the Forth Conservancy Board, recently made a tour of inspection of the Mersey lightships on board the Dock Board steamer "Vigilant." His object was to make acquaintance with the devices in use on the Mersey—ashore and afloat—for fog-signalling purposes. His lordship, who was accompanied by other representatives of the Forth Conservancy Board, went out to the Mersey Bar and other lightships, which he inspected under the guidance of Mr. Charles Livingston (chairman of the Marine Committee of the Dock Board) and Captain F. W. Mace (marine surveyor). Lord Elgin stated that the Conservancy Board had erected a new fog signal on the Forth to help in the navigation of the river. After what he had seen that day on the Mersey he would be able to tell his colleagues of the Conservancy Board that they had much better adopt some such system of fog signalling as that in use on the Mersey.

### Profitable Mersey Bridge.

Widnes Transporter Bridge, which connects Runcorn with Widnes and crosses the River Mersey and the Manchester Ship Canal, is now debt free. For several years after the opening, the bridge was not a profitable undertaking, and when it was offered to Widnes and Runcorn the latter authority declined to take over the responsibility for its upkeep. That was when it was losing £750 per year. Widnes had already £25,000 invested in the bridge company, and in 1910 decided to take over full responsibility for the bridge, which has been maintained in up-to-date condition in order to cope with to-day's traffic demands. Speculation is rife as to how the bridge undertaking will be affected by the new Mersey Tunnel. No one can say what effect it will have on the bridge. Although the net debt outstanding in the books is £7,780, there is £14,300 in the reserve fund. The capital account of £16,739 is being paid off ten years before the specified time. The bridge has been put in excellent order by the consulting engineer and Mr. Wood, the Council's engineer.

### L.M.S. Garston Docks.

Reduced rates for discharging and loading vessels at Garston Docks by 6½ per cent. in consequence of the reduction in wages of dock labour have been introduced by the dock owners, the London, Midland and Scottish Railway Co. The concession applies to quay portage, warehousing, storing in the open, and other services. The company hopes that the lower dock charges will be the means of making Garston Docks busier. The chief traffic is timber, coal and ores. Piecework rates are subject to a different arrangement.

### Preston Docks' Progress.

Preston Docks owe their development largely to the large and constant importations of timber, and in more recent years to the heavy arrivals of petrol. The capacity of the channel for bringing vessels into the dock is indicated by the fact that not very long ago a cargo of 5,400 tons was brought in by a steamer with a docking draft of 20-ft. 6-in.

In the abstract of accounts issued for the year ending March 31st, 1931, the total traffic income amounted to £215,000. Dock dues were responsible for £33,000 of that total; cargo dues, £39,000; discharging and warehousing, £63,500; tipping and trimming coal, £24,700; weighing, £20,500; and ground and quay rents, £10,000. The Preston Dock employs permanently more than 300 men. In 1893 the import of merchandise totalled

69,033 tons and export 25,100 tons, while there was a working deficiency of £9,348. In 1930 and 1931, 672,458 tons and 610,928 tons respectively were brought to the port, while the animals landed in these two years numbered 81,790 and 75,268 respectively. In 1930 the exports totalled 170,882 tons, and in 1931, 217,651. Last year the gross income was £223,750, and the working expenses £171,218, which left a working surplus of £52,532. The dock estate is 40 acres in area, and has an entrance basin of 4½ acres. The dock itself is 3,200-ft. long and 600-ft. wide, and the basin 850-ft. long by 300-ft. wide. The length of the quays in the dock and entrance basin is over 1½ miles and the area of storage behind the quays is 170 acres. The sheds and storage warehouses provide 39,239 superficial yards of covered floor space. There is storage for more than 42,430 tons of spirit, equal to about 12,725,000 gallons, and the development apparently goes on. In addition, there is storage accommodation for 5,000 tons of liquid bitumin. Coal-handling appliances comprise two modern hoists, each capable of loading 400 tons an hour, and a hydraulic coal crane of 25 tons capacity which can load 200 tons per hour.

### Smaller Ship Canal Traffic.

Considering the state of trade during 1931, the returns of the Manchester Ship Canal Company can hardly be regarded as unsatisfactory. In December approximate traffic receipts amounted to £113,962, as against £118,986 in the corresponding month of last year. The Canal Company advises that the total receipts for last year were £1,276,110, this being a decline of £119,457 from the previous year.

### Model of Gladstone Dock System.

The working scale model of the Gladstone Dock system, which was exhibited at the Antwerp Exhibition in 1930, built to a scale of 30-ft. to one inch, was on view at the Mersey Dock offices for inspection by members of the Board recently. It enables the spectator to visualise the great extent of the Gladstone Docks, and to see the ease with which the largest vessels can dock and undock there at any state of the tide. It shows as well the warehouses, cranes and other features, besides eighteen steamers all afloat, two of them entering and leaving the docks.

### Heavier Cross-River Traffic.

The growing popularity of the Seacombe vehicular ferry service, since the completion of the new floating roadway and the abolition of the obsolete hydraulic lift, is indicated in the official traffic returns for December. During that month 38,688 vehicles of all descriptions were conveyed on the goods steamers, compared with 35,938 during the corresponding month of the previous year, while the toll receipts were increased from £4,017 to £4,388.

### All-Night Overtime Suggested.

The question of introducing all-night overtime at the Port of Manchester is again likely to be raised. It is expected that a joint move will be made by the Manchester Ship Canal Company and the Manchester Steamship Owners' Association to induce the trade unions to reconsider their previous decisions not to accept all-night overtime at the docks. The position is that very often steamers with part cargoes for Manchester and Liverpool will not come up the canal because they would be detained over the week-end, and thus lose a day or more at sea. The week-end is a very important period in the shipping trade. The objection of the unions is that if their members work all-night overtime there will be no work for the day time.

### Abolition of Pilotage Station Proposed.

Representatives of the Liverpool shipowners have waited on the Pilotage Committee of the Mersey Docks and Harbour Board, to urge that the Point Lynas pilotage station be abolished and that the pilot boats be concentrated at the Bar Station. The Atlantic shipping lines, with the exception of the Canadian Pacific Steamships, Ltd., it is believed are in favour of its abolition. It was pointed out during the discussion, that the withdrawal of the Point Lynas station would mean a considerable reduction in the number of pilots, many of whom would have to be retired.

### Dock Board Appointment.

Lieut.-Col. J. G. B. Beazley, who has been elected vice-chairman of the Mersey Docks and Harbour Board, is the eldest son of the late Mr. Edwin A. Beazley, an audit commissioner of the Mersey Docks and Harbour Board for 21 years, and a grandson of Mr. James Beazley, who was a member of the Dock Board from 1863 to 1867. In January, 1928, Col. Beazley was elected a member of the Dock Board, a position he still holds as the nominee of the Steamship Owners' Association.



## Notes from the North—continued

**Douglas Harbour Master.**

It is with regret we record the death of Mr. George Edward Kelly (69) harbour master at Douglas, Isle of Man. He had been in charge of Victoria Pier since 1908, and had dealt with passenger traffic running to nearly fifty sailings and involving 60,000 holiday-makers in one day.

Mr. W. H. Moore has been appointed harbour master at Douglas, I.O.M., in succession to the late Mr. George E. Kelly. Mr. Moore has been first assistant harbour master at Douglas since April, 1930, and has been in the service of the Harbour Commissioners (except for the war years) continuously from 1910, when he was appointed boat inspector. He was harbour master at Peel from 1917 to 1919. Mr. Moore's place as first assistant harbour master is being filled by Mr. T. E. Cowell, at present second assistant.

**Mersey Sewage Problem.**

Emphasising the importance of a commission of inquiry into the Mersey sewage problem, Mr. R. D. Holt, chairman of Mersey Docks and Harbour Board, stated at a recent meeting that those responsible for the administration of the great municipalities on Merseyside must realise that their prosperity and, indeed, solvency, are bound up with the maintenance of the Mersey as a river navigable by the best and largest ships afloat, and with that maintenance being secured as economically as possible. The Dock Board recognise that their interest and that of the traders was bound up with the economical administration of the municipalities, and that to impose upon them in respect of the treatment of sewage or any other matter an expense which was properly avoidable was to injure themselves gravely by adding unnecessarily to the burden of rates. The municipalities and the Board were partners in a common enterprise—each charged with the direction of a different department of the business, and with the realisation of this fact there should be no difficulty in working harmoniously towards the common goal. The Board had never contemplated unreasonable or hostile claims on any of the Merseyside Corporations which could only result in injury to the trade of the port. The continued discharge of sewage was a very serious matter, however, and raised a problem with which the Board and the municipalities must grapple promptly.

If the area of the Upper Mersey was progressively reduced by hardened sand banks, which restricted the free ingress of the tide, the banks would gradually extend down the river, making access to the Southern docks more dangerous for navigation, and then finally impossible, unless at enormous expense for dredging. No one could desire the abandonment of the docks at the south end, and the transference of trade at great expense to new docks north of the Gladstone Dock. They did not want unnecessary expense in the reconstruction of all the sewers, and certainly some crude sewage could be tolerated. The question of how much of that nauseous effluent the river could digest properly was one for calm scientific discussion. Obviously the economical way of restricting the total crude sewage discharged into the river was in making sure that sewers in the new districts should be as perfect as modern science could make them, and thereby reducing to a minimum, the necessity for treating the effluent from the sewers in the centre of the towns, where the land was fully developed with streets and houses. Therefore the Dock Board must object to any new schemes which involved imperfect sewage.

Sir Thomas White, leader of the Liverpool City Council, explains that the effect of the Dock Board's action is to challenge the right which has been enjoyed for centuries by Liverpool and the other local authorities on the River Mersey to discharge sewage into the river. The municipalities are naturally fully alive to the importance of the river being navigable, thus providing ingress and egress into the port for the largest ships afloat, and a conference of the riparian authorities on the Mersey recently met and decided to support a joint application by themselves and the Mersey Docks and Harbour Board to the Department of Scientific and Industrial Research to carry out an investigation which it is estimated will cost about £20,000. The Mersey Docks and Harbour Board is now asking, as regards new sewage schemes, that the sewage should be screened and passed through sedimentation tanks for the removal of all solid matter before discharge into the river. To this request certain authorities have agreed during the last ten years. What has brought the matter to a head is the proposal of the Liverpool Corporation to include the township of Speke.

The decision of the Ministry of Labour sanctioning the order whereby Speke will be incorporated in the city as from April 1st, means that the opposition of the Mersey Docks and Harbour Board to the incorporation of Speke has been over-ruled. The object of the Board was to prevent untreated sewage from Speke going into the Mersey, but the Ministry has ruled in favour of the Corporation, whose contention was that developments in the added area should not be held up pending the result of a scientific enquiry into the question of the relation of sewage to river silting.

**Wallasey Appointment.**

Wallasey Corporation has appointed Mr. O. Davidson as Engineering Assistant Manager, to the Ferries, in view of the forthcoming retirement of Mr. R. P. Rennie. Mr. O. Davidson has filled the position of Assistant Ferries Engineer.

**Wallasey Embankment Works.**

At the last meeting of the Wallasey Embankment Commissioners, it was reported that the expenditure on ordinary works and maintenance of £1,823 4s. 11d. was considerably less than in previous years the average for the last three years being £6,000.

**Dee River Works.**

According to the annual report of the Acting Conservator to the River Dee Conservancy Board, the average condition of the navigation during 1931 with regard to depth has been better than the average condition of 1930. Changes in the course caused the low water channel to follow the Northern Training Wall for the whole length of the wall, and this condition was continued for the whole of the year. The work of closing the gap and repairing the Training Wall above it, was completed in September; 5,798 tons of stone have been used and the total cost is £3,175. The High Training Bank during the year has been extended a further 144 yards, making a total length since the commencement of the work of 2,860 yards. The L. & N.E. Railway has commenced the repair of the wharf at Connah's Quay, and the work is still in progress. The number and tonnage of vessels arriving at the several stages on the river for 1931, as compared with 1930 shows a decrease in number of 447, and a decrease in tonnage of 31,023. The channel was an average of 6-in. better in 1931 than it was the previous year. Ald. Henry Powell states the Board is endeavouring to improve the navigation of the river. During the last twelve months they had been in consultation with the Flintshire County Council with regard to the expenditure of a sum of money and to the obtaining of an expert's advice on various schemes that had to do with the improvements of the river. That advice had been received, but unfortunately, owing to the financial crisis of the country at the present time, they had not been able to act upon it.

**Cost of Tunnel Exceeds Estimates.**

The cost of the Mersey Tunnel works which are now approaching completion, was originally estimated at £5,200,000, but owing to unexpected engineering difficulties chiefly in connection with the ventilation plant, it is probable, if local information is correct, that the estimates will be exceeded by £1,500,000—a very bitter pill for the ratepayers in the Mersey boroughs to swallow.

When the Mersey Tunnel Act was passed, a clause was inserted, providing that in the event of difficulties of an engineering or similar character, in connection with the construction of the works, involving an appreciable increase in the cost, the Ministry of Transport would consider making a further contribution from the Road Fund of not more than 50 per cent. of any such increase.

Since then, the country has been through the turmoil of an economic crisis. Expenditure has been ruthlessly cut and relief schemes abandoned, because of the lack of funds with which to meet the costs. In the circumstances, one might well ask if the government will be disposed to meet up to 50 per cent. of the estimated deficit.

This problem of ventilation has been troublesome all along, and is created by the effect of gases from different types of vehicles behaving in a different manner. Originally, it was thought that the cost of the ventilation system would be £60,000, a figure which has fallen very far short of the mark. The latest estimate is that the cost will be over £1,000,000.

The estimates have also been exceeded for the cost of land and buildings at the tunnel entrances. When the tunnel works were started, it was agreed £2,500,000 should be provided from the Road Fund. The rest of the money is raised locally.

Although the main work on the new Mersey Tunnel has been finished—work now proceeding being confined to footpath construction and the work on the emergency exits at the Morpeth Dock and George's Dock, Birkenhead—457 men are still in employment on the various contracts. In addition to these operations, however, work is proceeding at the ventilation stations at New Quay, North John Street, George's Dock, Woodside, Sidney Street, and Taylor Street, where £192,000 has been expended to date. The concrete in roadways is now completed, together with 93 per cent. of the concrete filling and 93 per cent. of the footpaths. Without ventilation, the tunnel cannot be thrown open to motors, and ventilation is going to cost both much money and time. The foundations of the ventilation buildings will entail much thought and work—so much, indeed, that the estimated opening date seems now to be receding from the spring to the autumn of next year.



# Notes from the North—continued

## New Look-Out Device.

Mr. A. W. Livingstone, a Liverpool man, has invented a device for securing a clear view from the bridge of steamers in the worst of weather. It consists of two screens set up in parallel, with two open slits exactly opposite each other, through which the clear view is obtained. Beneath the outer slit there is a channel three times as wide as the slit, which leads upwards and backwards through the open space between the slits into a continuation of the channel, which passes over the head of the look-out man. The wind and rain which rush in through the outer observation slit, are met by the wind which enters by the channel below, and the force of the wind through the channel being so much greater, the wind and the rain are carried upwards and through the upper channel. The device has been patented and is being taken up by the steamship companies.

## New Grain Discharging Plant.

Influenced by the excellent results obtained by the new discharging plant at their north end warehouses at the Alexandra Dock, Liverpool, and in the wish to meet the desire of customers for equal facilities throughout their system, Liverpool Grain Storage and Transit Co., Ltd., propose to install a similar plant in connection with their south end warehouses at Coburg Dock. At the annual meeting of the Company, Mr. Edward Paul, chairman, expressed the company's appreciation of the very fair-minded manner in which the Mersey Docks and Harbour Board had met them in arranging the lease. The new plant will involve an expenditure of some £30,000 and though they believed this expenditure to be fully justified, and, in fact, necessary, it none the less provided a reason against increasing the dividend now. The company had attracted a much greater volume of traffic, last year's figure of 500,507 tons, being a record in the Company's history.

## Latest Mersey Bridge.

The newest bridge over the River Mersey is that known as the Princess Road Bridge, Manchester, designed by the Manchester City Engineer, Mr. Jorrek. It is 208-ft. in length and 80-ft. in width, and is built with three arches, the centre one having a 40-ft. span and the two others 36-ft. each. In previous road bridges, piers of brickwork were built round a core of mass-concrete, but in this case the piers are of solid brickwork. When the boreholes were sunk there were traces of blue clay and later Keuper marles found, and upon these the northern foundations were laid. A fault on the southern side had to be bridged with concrete.

Sudden storms made it necessary for the engineers to take precautions against the danger of flooding in the coffer and these preparations were well justified.

The bridge was officially opened by the Minister of Transport.

## Free Port Areas.

Liverpool Steamship Owners' Association, having in mind the importance to the United Kingdom of the transshipment trade, has issued a statement urging upon the government the vital necessity of ensuring, in the event of the introduction of a general Customs tariff on imports, the provision of adequate free port areas in the ports of the United Kingdom, so as to

enable the discharging, loading and handling of transshipment cargo to be carried on in such ports, free from all control by the Customs. Much information is given in the report of the investigations which have been made in other countries of the case for free ports.

In a document by M. Robert Haas, Director of the Communications and Transit Section of the League of Nations, it is stated that the examination of the traffic in big ports having free areas, such as Hamburg or Copenhagen, goes to show that a great part of the merchandise imported into those ports leaves them again after a varying delay, and is re-exported by sea; the merchandise during this delay having been safely warehoused; being, perhaps, in the course of their stay in the warehouses, the subject of re-assortment, parcelling, selection and commercial handling of every sort, or possibly having been subjected to still profounder alterations of an industrial nature. In this way, great ports become not merely the import and export points of national trade, but centres for the storage, and the markets, for any given category of goods. The United States Shipping Board in their report of 1929 says:—"The size of Hamburg's harbour area, including industrial areas in the free port, is 10,000 acres. The area of the free port only is 3,340 acres, of which 1,500 are land and 1,840 are covered by water. Of the total area of 1,250 acres of water occupied by basins for seagoing ships, 1,100 acres lie in the free port, and only 150 acres are within the Customs area. Thus, of the area available for seagoing vessels, only 13.6 per cent. is not free-zone area. At Hamburg there are 860 acres of water, occupied solely by basins for river craft, of which 375 acres are in the free harbour and 485 in the German Customs area."

The value of the transshipment trade to the United Kingdom is shown by the fact that before the war, it was upwards of 15 per cent. of our total overseas trade; and that it still represents 10 per cent. of that trade. Compared with the value of "Exports of United Kingdom Produce," the transshipment trade represents in: London, 38.6 per cent.; Southampton, 29.2 per cent.; Bristol, 23.7 per cent.; Liverpool, 7.3 per cent.; Hull, 5.4 per cent.; and Leith, 3.9 per cent. And in the cross-Channel ports; Dover and Folkestone, 71.1 per cent.; Harwich, 43.3 per cent.; and Newhaven, 39.6 per cent.

The view is expressed at Birkenhead that if the Mersey Docks and Harbour Board could accelerate the completion of the new Bidston Dock, now in course of construction, this, in about a year's time, would make an admirable centre for dealing with cargo for re-export. Goods and commodities coming to Liverpool side of the river could be lightered across, and, when the Mersey Tunnel is open, sent across in record time. A large quantity of cargo will come to the Mersey from both the Near East and the Far East for re-export, and in many cases such cargoes could go direct to Birkenhead and be dealt with at the new Bidston Dock. The quay areas at the new dock will be levelled so as to provide space for continuous sheds 100-ft. in width, and will be served by road and rail communication extending along the quays and the back of the sheds. The dock area will have direct communication with all the main lines of railway, and the surrounding land offers excellent accommodation for warehousing or any other form of extension which the development of this new ocean traffic would possibly call for.

# The Port of New Orleans

During the month of December 204 sea-going vessels arrived in port, and there were 207 departures.

The gross tonnage of sea-going arrivals during the month showed a total gross tonnage of 874,487. The tonnage of vessels using the public docks totalled 742,714, and cargo paying tollage amounted to 246,370 tons.

Several commodities moving over the port's wharves showed splendid increases. Miscellaneous imports increased 2,126 tons. Of the exports, textiles increased 15,834 tons and vegetable food products showed an increase of 34,661 tons.

For the twelve months period ending December 31st, 1931, 2,974,772 bags of Brazilian green coffee were received. This was an increase of 136,646 bags over the same period of the previous year. In addition to the Brazilian coffee 297,654 bags of mild coffee were received. Bananas to the extent of 1,115,621 bunches were also handled in December.

The Inner Harbour Navigation Canal was also the centre of much activity. During the month 960 vessels with a total tonnage of 307,628 used the canal.

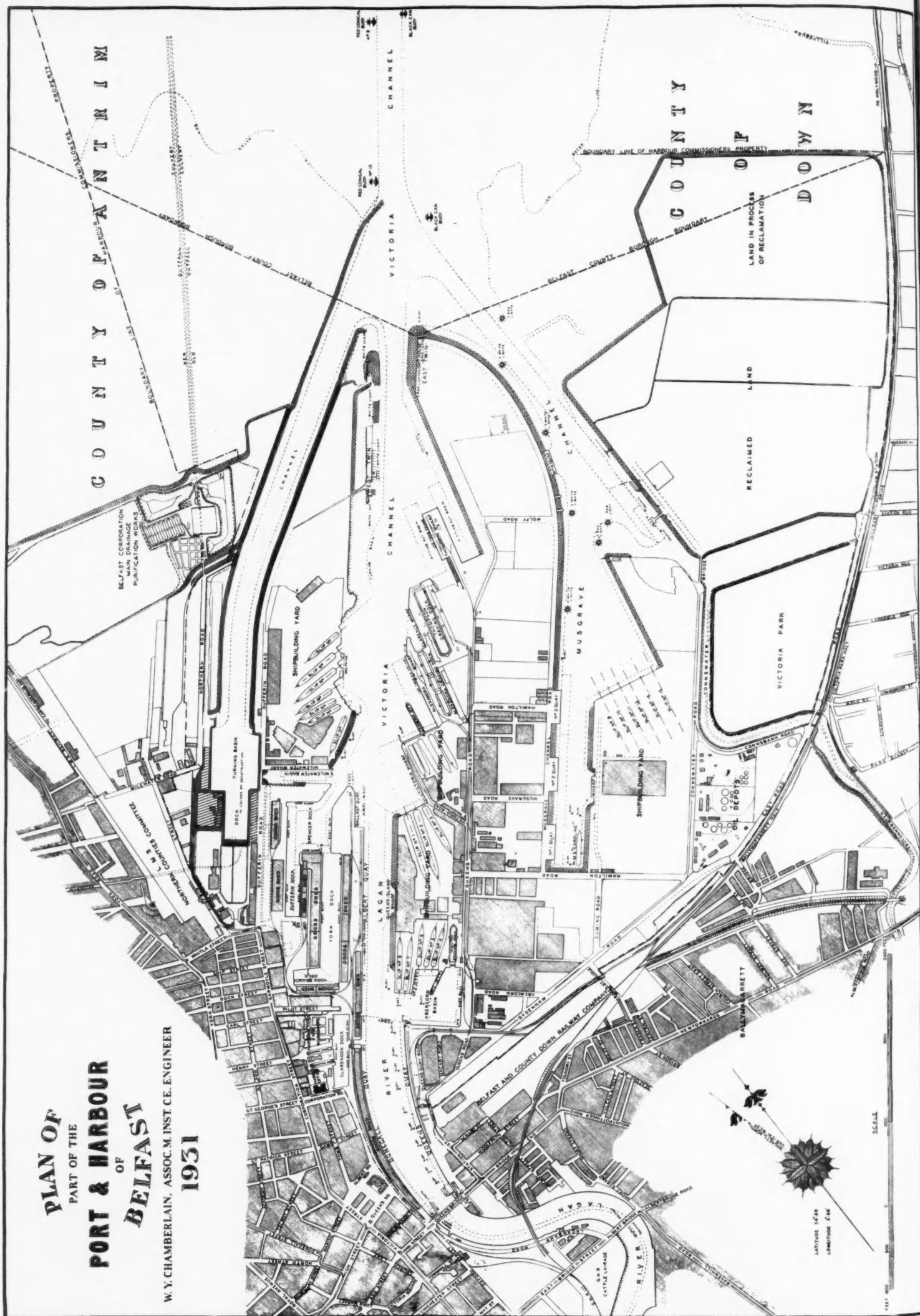
Three hundred and thirty-eight inland watercraft of more than 25 tons arrived during December with a total tonnage of 134,581 tons. This was an increase of 6,554 tons.

Of the sea-going vessels arriving during the month, 116 with a total tonnage of 490,279 tons were of American registry. This

represented more than 56 per cent. of the ships and more than 56 per cent. of the tonnage. Honduras was second in number of ships and third in tonnage, with Great Britain third in ships and second in tonnage.

The following is a tabulation of the number of sea-going vessels, showing gross tonnage and arranged by countries, which arrived during December, 1931:—

Nationality.	No. of Vessels.	Gross Tonnage.
American ... ..	116	490,279
British ... ..	19	117,589
Brazilian ... ..	2	9,669
Belgian ... ..	1	5,086
Danish ... ..	3	10,965
Dutch ... ..	1	8,871
French ... ..	1	4,945
German ... ..	7	27,428
Honduran ... ..	27	80,258
Italian ... ..	8	46,209
Japanese ... ..	3	22,843
Nicaraguan ... ..	4	4,732
Norwegian ... ..	10	33,381
Swedish ... ..	1	5,608
Spanish ... ..	1	6,632
	204	874,487





## The Port of Belfast

### A Century of Progress.

THE modern history of the Port of Belfast might be said to have begun in the year 1847, when the Magna Charta of the Port, the Belfast Harbour Act, 1847, was enacted, whereby the Belfast Harbour Commissioners were constituted a statutory body and became the Port Authority.

Originally composed of seventeen, afterwards increased to twenty-two members, including the Lord Mayor of Belfast as an *ex officio* member, the Belfast Harbour Commissioners have continuously since their constitution to the present day governed the affairs of the port, not only with energy and ability but also with great vision and courage. Their first act, on assuming the responsibilities delegated to them, illustrates well the progressive spirit which they brought to their task. Scarcely had they taken over control than the completion of the deep water channel leading direct to the sea, begun by the former governing body some years before and left unfinished, was put in hand, and within two years was successfully accomplished. Named the Victoria Channel in honour of Her Majesty Queen Victoria, this channel has made possible the creation of the present day Port of Belfast, and is the artery through which has pulsed the flow of trade, foreign, cross-channel and coastwise, chiefly responsible for raising the status of Belfast from that of a town of 87,000 inhabitants to a city with a population exceeding 400,000.

The Victoria Channel has, of course, been improved from time to time as necessity dictated, but its first opening marks the beginning of the transformation of the Harbour of Belfast from a mere tidal estuary into a modern port, capable of taking the largest vessels afloat with the maximum of safety and expedition. Nor did the new Board fail to realise and anticipate the changed conditions which the formation of the new channel would bring in its train. Docks were constructed, land was purchased, works of reclamation were put in hand; in fact during the first five years of their regime the Belfast Harbour Commissioners entered into their task with almost feverish activity, and the Port of Belfast as it stands to-day is a worthy monument not only to those first Commissioners, but to their successors in office right down to the present day, who, emulating their example, have planned and built with but two ambitions—the betterment of the Port and the advancement of the trade of Belfast and of the Province generally.

Located at the head of Belfast Lough, a natural inlet of the sea, about twelve miles long on the north-east coast of Ireland, the port constitutes an ideal ocean terminal and distributing centre, inasmuch as its position combines all the advantages of the true seaport with many of those of an inland port, as a glance at the map will show. The long, capacious lough and deep water channel comprise not only one of the safest and most accessible of harbours, but enable ships to get so far inland as to lessen rail and road freight charges very considerably. The tidal range is only nine and a half feet at its maximum, rendering dock gates unnecessary and permitting vessels to proceed direct to and from their berths without experiencing the delays inevitable at ports where docking can only take place at certain states of the tide.

### Equipment and Facilities.

The facilities provided by the Commissioners include seven miles of quays affording berths for vessels drawing up to thirty feet; extensive ranges of commodious and well lighted sheds; accommodation for storing coal, iron, steel, grain, etc., also timber on land or in ponds; railway lines and sidings providing communication with all parts of Ireland; a deep water berth

(500-ft. in length) reserved for oil tankers; cranes ranging in capacity from two to ten tons for ordinary loading and discharging, with special cranes for heavy lifts up to 150 tons. As a result of the large schemes of reclamation which have been carried out, extensive areas abutting on the waterside and railways are at the disposal of those seeking to establish new commercial or industrial undertakings. There are a number of graving docks of varied capacity, of which one is the Thompson Graving Dock (887-ft. long), which accommodated the s.s. "Britannic" (48,000 tons)—the largest vessel built in the United Kingdom before the Great War and afterwards torpedoed in the Mediterranean whilst serving as a hospital ship—the "Olympic," the "Titanic," and that more recent triumph of the shipbuilder's art, the m.v. "Britannic."



Cranes at Albert Quay, Belfast.

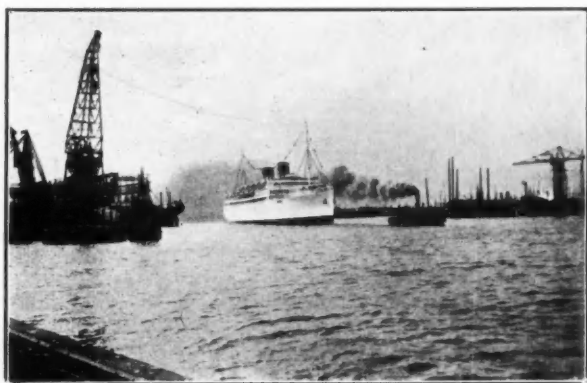
To meet the requirements of the shipping companies engaged in the Transatlantic passenger trade, which have regular sailings to and from the port, a jetty, with two spacious buildings, equipped with waiting rooms, accommodation for Customs examinations and medical inspections, etc., is provided.

Suffice it to say that there is no port more efficiently equipped for dealing with all the demands, no matter how varied, which shipping and other forms of transport might make, and no effort is spared to keep the port completely up to date. Moreover, the natural advantages of Belfast and the efficiency which has marked the administration of the port throughout its history are reflected in its charges, which, for the services rendered, are substantially lower than at other ports.

To those who may be contemplating the establishment of new undertakings, it will be of interest to know that the Belfast City Electricity Station supplying power and light at rates comparing favourably with those of other cities throughout the Kingdom, is situated in a central position on the Harbour Estate.

### A Great Shipbuilding Port.

No description of the port would be complete without reference being made to the shipbuilding industry, one of the staple industries of Belfast. Two world-famous shipbuilding firms—Messrs. Harland and Wolff, Ltd., and Messrs. Workman, Clark (1928), Ltd.—have their establishments located on the Harbour Estate, and the Seven Seas are traversed by vessels which first entered the water off the slips of these renowned firms, and set out on their maiden voyage from Belfast Lough. A notable achievement by a recent product of the first named firm is that of the m.v. "Reina del Pacifico," which, on her maiden voyage, accomplished the outward run from Liverpool to Valparaiso in the record time of 26 days against the previous fastest passage of 34 days.

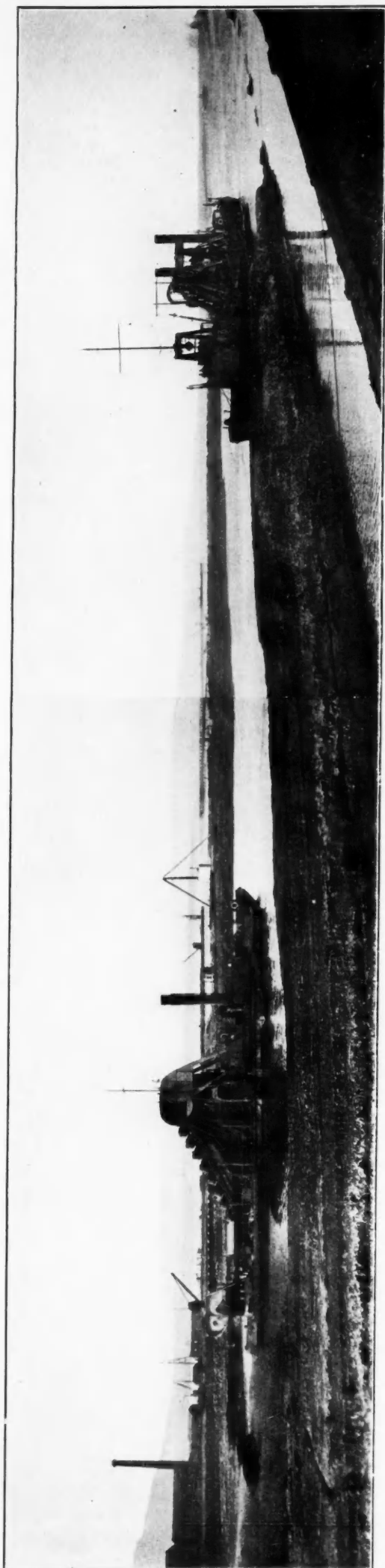


M.V. "Reina del Pacifico," built for the Pacific Steam Navigation Co. by Messrs. Harland & Wolff, leaving Belfast on her maiden voyage.



York Dock, Belfast.





Dredgers at Work in Approach Channel leading to New Dock.

### The Port of Belfast—continued

Another event of more than ordinary interest in ship-building circles took place in May of last year, when there was launched in Belfast Harbour the world's largest whaler, "Kosmos II." This vessel, built by Messrs. Workman, Clark (1928), Ltd., for Norwegian owners, is designed to serve the purposes not only of a whaler, but also of a whaling factory, and is a model of ingenuity and engineering skill specifically applied to the pelagic whaling industry.

#### Development of the Port.

The year 1931 has seen a number of important improvements undertaken throughout the Harbour Estate, chief amongst them being the installation of electrically-driven pumps in the older graving docks, improved lighting, extension and structural alterations of shed accommodation, the raising of keel blocks in two of the larger graving docks, the modernisation of fog signal apparatus and the better lighting of buoys.

In the main, however, the attention of the Commissioners has been focussed on development work in the shape of a new dock scheme on the County Antrim side of Belfast Lough which, inaugurated in 1930, is estimated to cost upwards of £400,000 and to take three years to complete.

The dock is in two sections, the first comprising a large turning basin 570-ft. wide, round which there will be no less than 1,935-ft. of quayage. The dock proper, lying to the south of the turning basin, will have a total width of 280-ft. and a depth of 30-ft. at ordinary low water, with 1,100-ft. of quayage. Adequate shed and railway facilities are being provided, and many admirable waterside sites for industrial undertakings will become available in addition to those already in being in other parts of the Harbour Estate.

The construction of the quays around the new dock and turning basin (with the exception of the two quays mentioned below) was placed in the hands of Messrs. Charles Brand and Son, of Westminster, and this part of the work has recently been completed.

At the south-west corner of the turning basin, and along the greater portion of the west side of the dock itself, Messrs. Joseph Rank, Ltd., to whom the Board granted a lease of land, have undertaken to build flour mills of large capacity, together with the two concrete quay walls connected therewith. These walls, and also the piled foundations for the buildings, were entrusted to Messrs. Sangwin, Ltd., of Hull, while the erection of the reinforced concrete silo is being carried out by Concrete Piling, Ltd., of Belfast and London. The mill and warehouse, together with the ancillary buildings, are being constructed by Messrs. Courtney and Co., Belfast.

Although begun little over 2 years ago, it is estimated that more than half of the dredging work of the entire scheme is completed. The approach channel, some 2,000 yards in length and 250-ft. wide at the bottom, leading direct to the main waterway of the Harbour, has been completed, and the dredging of the turning basin is proceeding.

The provision of adequate land communication leading to the quays on the north-western side of the new dock and turning basin has not been overlooked, and the construction of a 60-ft. road with tramway linking up the quays with existing roads and tramways is well advanced.

The whole of the work is being carried out to the designs and under the supervision of Mr. T. S. Gilbert, B.E., M.Inst.C.E., the Consulting Engineer to the Belfast Harbour Commissioners who are carrying out the work by direct labour with the exception of the quays and mill as already mentioned. The Resident Engineer in charge is Mr. R. D. Duncan, B.Sc., A.M.Inst.C.E.

The map published with this article shows clearly the situation of the new dock in relation to the rest of the Harbour Estate.

#### Trade of the Port.

Despite the great depression during the past few years in the shipbuilding and linen industries—the two staple industries of Northern Ireland—the Port of Belfast is, nevertheless, in the happy position of being able to record continued progress, as is indicated by the traffic figures of the Port, which are given below:—

Year		Tonnage arrived	Tonnage cleared	Total
1927	...	3,050,297	3,121,739	6,172,036
1928	...	3,023,245	3,070,986	6,094,231
1929	...	3,277,727	3,384,484	6,662,211
1930	...	3,675,716	3,700,418	7,376,134
1931	...	3,697,219	3,820,251	7,517,470

Year		Goods imported Tons	Goods exported Tons	Total Tons
1927	...	2,783,715	523,716	3,307,431
1928	...	2,623,596	514,323	3,137,919
1929	...	2,953,792	508,292	3,462,084
1930	...	2,840,870	463,549	3,304,419
1931	...	2,805,139	430,725	3,235,864

## North-East Coast Notes.



Entrance to Blyth Harbour. East Pier Lighthouse.

### River Wear's Achievement.

THE complete official returns of the coal and coke shipments from the three main ports on the North-East Coast only issued a little while ago caused no surprise, for they were much what had been expected. The year's figures were:—

		1931 Tons	1930 Tons	Tons
Tyne	...	13,958,701	17,239,125	3,280,424 (decrease)
Wear	...	4,905,550	4,837,409	68,141 (increase)
Blyth	...	4,554,747	4,810,735	255,988 (decrease)

It was a notable achievement for the Wear to have obtained sufficient trade in a year of exceptional depression to have topped the figures for the previous twelve months.

### Tyne Quay Progressing.

Excellent progress is being made with the extension of Newcastle Corporation's quay. Members of the Trade and Commerce Committee inspected the works recently, and satisfaction was expressed at what had been accomplished. Alderman Walter Lee (chairman), Alderman J. F. Weidner, Alderman David Adams and Councillor R. S. Dalgliesh were notable quay-side members of the Committee to attend the inspection.

The new quay will be 700-ft. long, and it is hoped that it will be completed by the end of April. Dredging operations are still in progress. Already 100,000 tons of silt have been removed. More than 15,000-ft. of piling have been driven in, and there are still more piles to be placed in position. During the past two years an average of more than 700,000 tons of shipping have used Newcastle Corporation Quay, bringing in an annual revenue of over £28,000. The latest facilities for handling commodities are to be installed.

Good despatch in the loading of steamers is steadily maintained on the Tyne. The "Baron Loudoun" loaded 4,400 tons of coal and 1,000 tons of bunkers at Dunston for St. Thomas, West Indies, in quick time at the end of January. The ship was at Dunston under 30 hours.

### Tyne Improvement Commission's New Feature.

The Tyne Improvement Commission have introduced a new feature into their reports, namely, details, month by month, of their general imports and exports. The varied character of the river's trade is vividly displayed in the returns for the eleven months to the end of November (the latest period issued). For instance, the imports included cement, chemicals, canned fruit, sugar, tea, coffee, apples, pears, oranges, lemons, grapes, wheat (this totalled 166,216 tons); maize, flour, iron manufacturers, iron ore (this totalled 184,744 tons); oil fuel, petroleum, paper, bacon, butter, eggs and timber (this totalling 269,127 tons).

The exports embraced sulphate of ammonia, firebricks, fire-clay, cotton, jute, linen, wool goods, pig iron, manufactured iron and steel, oil fuel bunkers, tar, pitch and resin.

### Fifty Years on the Wear Commission.

A little more than a month ago Mr. Ralph Milbanke Hudson celebrated the jubilee of his membership of the River Wear Commission, and the occasion was marked by presentation of gifts from members of the Commission and the staff, which were handed over by the chairman, Mr. J. E. Dawson. Mr. Hudson, in responding, made extensive reference to the works of the Commission. Having complimented past engineers on their achievements, he said, the present engineer, Mr. Tripp, would have his monument in the new staith and the deep-water quay which, the speaker believed, would be a great asset to the town, especially if it were accompanied by the removal of the rest of the rocks at the entrance of the river giving a depth of

water to the quay, he hoped, of 30-ft. at low water. The quay would then become one of the finest, if not the finest, on the coast, a place where ships could come in at any state of the tide and could have their cargoes discharged probably before they could have reached the quays of the other ports.

"I should like to see," Mr. Hudson added, "the River Wear Commission allocate at least £2,000 a year for the improvement of the upper reaches of the river. Every cubic yard of material that you remove there means an increased scour of an equal amount twice a day on the bar, which will maintain the depth of water and save dredging the lower reaches. The Commissioners have an asset in the Pallion reach, where a new dock can be excavated at a minimum of cost, and a great development may take place in manufacturing sites. The difficulty we have in Sunderland in the import trade—and in the manufacturing trade—is that we have no hinterland in the lower reaches. We are too confined. If that Pallion reach is developed, you will have an opportunity of shipping coals there, and, with the hinterland there, of developing the port."

During 1931, 2,966 vessels, registering 2,367,577 tons, cleared from the Port of Sunderland, and the tonnage rates received amounted to £66,513 3s. 9d. In the year 1930 the number of vessels was 2,985, registering 2,409,164 tons, and the tonnage rates received were £71,365 15s. 4d.

### Long Service Ended.

When Mr. J. H. Amos resigned his position as general manager of the Tees Conservancy Commission last summer, after 44 years' service, he was appointed consultant to the Commission. At a meeting of the Commission recently, he tendered his resignation in that capacity, and the Board, in accepting, placed on record their high appreciation of his services.

### Blyth Harbour Commissioners.

At the January meeting of the Blyth Harbour Commissioners, Mr. Ridley Warham, the chairman, referred to the visit which the delegates from the Baltic and International Maritime Conference Committee paid to Blyth on Thursday, January 14th. One of the objects of the delegation, he said, was to investigate the causes of decrease in trade between that district and Scandinavia, which at the present time showed a very big decrease as compared with 1925, and it was hoped that as a result to some extent there might be a recovery in the trade to the Baltic ports.

### Meeting of the River Tyne Commission.

At the February meeting of the River Tyne Commission, Mr. F. Priestman, reporting on behalf of the Finance Committee, said that recently when asked by the Durham Executive Board under the Coal Mines Act for a reduction in dock and shipment dues, had to reply that in view of the persistent fall in revenue it would be impossible this year, with diminished trade and depleted revenue, still further to reduce dues.

A petition bearing 14,606 names was received from inhabitants of South Shields and Tyne Dock urging the removal of the town dues on the Tyne, as these had led to a diversion of coal trade from the Tyne to the Wear. The Chairman (Mr. H. P. Everett) said that while they received the petition with every sympathy, they preferred to defer consideration of the matter till they got the decision of the District Investigation Committee of the Coal Marketing Board. A large portion of their revenue came from town dues, as for each million tons shipped they got £7,000, so that before they abolished these dues the matter must have a great deal of consideration. The Commission lost nearly 2d. per ton on every ton shipped.

Sir George Lunn proposed that the matter be adjourned, and this course was adopted.

## Hull and the Humber



*Tanker discharging Oil at L. & N.E. Rly. Co's. New Saltend Jetty, Hull.*

### Hull Dock Improvements.

IMPROVEMENTS are going steadily forward at the docks at Hull, the property of the London and North-Eastern Railway Company. In anticipation of the more general use of 20-ton wagons in the export coal trade, a number of the shipping appliances of the port are in process of being modified or reconstructed to deal with the larger wagons. In addition to this, an extensive new group of sidings is being laid down at the western end of the dock estate in the area of the main rail approach. Standage and marshalling yards are being provided embodying the latest methods of moving and controlling wagons. The work will provide accommodation for about 2,300 additional wagons. The area of this new "yard" is approximately 45 acres. In order to provide further facilities for the import timber trade a pond of 14 acres at the Victoria Dock has been filled in with material brought ashore by the company's suction dredgers, and on this, sidings, roadways and timber storage grounds have been constructed. At Saltend, at the eastern extremity of the London and North-Eastern Railway's estate, the accommodation for the petroleum industry is being extended, and an additional jetty with pipeline is contemplated. At Saltend all the principal petroleum companies have installations consisting of refineries, tank storage, etc. The imports of oil and motor spirit now exceed half a million tons annually, and promise to still further increase. The heavy arrivals of grain at Hull of late have emphasised the urgent need for more silo accommodation, and the commercial community are hopeful that when the financial outlook is brighter the company will accede to their representations. The existing silo at the King George Dock has a capacity of 40,000 tons of grain, and recently there have been inaugurated floating automatic grain-weighing machines, each with a capacity of 1,000 tons per hour.

### Work at St. Andrew's Dock.

Reference has been made in previous issues to the important work undertaken at the St. Andrew's Dock in the construction of a new fish market and the widening of the existing old quays. It is pointed out, however, by the trawler owners that while all possible steps have been taken to modernise and enlarge the facilities ashore, the provision of more dock space is still a problem. It often happens, more particularly in the spring season, that it is not possible to accommodate all the arrivals, and trawlers laden with their fish are thus compelled to wait for berths. The matter is before the railway officials, and it is hoped that something may be done in the near future to provide more berths.

### Road Bridge over the Humber would be too Costly.

Mr. J. H. Fisher, J.P., the Chairman of the Humber Conservancy Board, discussing in the "Trade of Hull" the proposal to erect a road bridge over the Humber to connect Hull with North Lincolnshire, writes that the convenience would be undoubted, as the cross river traffic is not too well served by a steam ferry, which is much interrupted during fog. He, however, points out that the risk and cost are too great. The river

Humber, he says, is one of the most, if not the most, vagarious rivers in the country. The channels are constantly altering, and any obstruction soon produces most extraordinary effects. The river authorities and experts who have most carefully studied the proposal say without a doubt a grave risk will be taken by placing so many buttresses (some 15) in the centre of the river, and might have the effect of diverting the deep water channel which now passes close to the Hull Docks into another part of the river, and so robbing Hull of the means of deep water access to her important dock system—a risk too grave for anybody who has the charge of the river entrusted to it to allow without the strongest opposition. It is suggested and confirmed by the House of Commons Committee that a scheme of training walls would prevent this by keeping the river in one channel; but these works, to be adequate, would cost millions of money. This extra cost would have to be borne by the shipping entering the Humber, thus taking away from Hull the proud position of the cheapest port in the Kingdom. Mr. Fisher asks the question: Are the small benefits which would accrue from a road bridge worth the risk and the heavy cost? In view of the financial crisis, he suggests that this is one of the schemes which should be abandoned as not necessary.

### Work at the Old Queen's Dock Proceeding Steadily.

Work on filling in the old Queen's Dock at Hull is proceeding apace. To date upwards of 800,000 tons of material have been deposited, and it is expected two million more tons will be required to complete the task. At the east end, near the old harbour, a permanent road bridge of concrete has been constructed, and at the west end dredging is proceeding with a view to building retaining walls to cut off the Prince's Dock and the making of a roadway over the lockpit now spanned by a bascule bridge. Across the middle of the dock a bar or dam of black sand has been made to provide ready access between the old town and Grimston Street. On what were the quays on the north and south, spacious new streets have been laid out, and thus early the dock is fast losing all semblance of its original self.

### Decline in Coal Exports at Humber Ports.

The coal shipping appliances at Hull last year were used considerably less than 50 per cent. of normal capacity, and the same applies to other Humber ports which, so far as the coal trade is concerned, experienced a very lean year indeed. The official Board of Trade returns show that the exports of coal (foreign) from the Humber ports (Hull, Goole, Grimsby and Immingham) in 1931 totalled 4,226,930 tons, comparing with 6,187,198 tons in 1930 and 6,499,762 tons in 1929, the decline on the year being 1,960,268 tons, equal to 31.6 per cent. The exports from "other East Coast ports" (Boston and Lynn) were 454,886 tons, against 447,649 tons, thus showing a slight increase over 1930. These figures, of course, do not include shipments coastwise and bunker coal. It is interesting to note that of the Humber exports the proportion sent to destinations in Europe was 86 per cent., the remainder being distributed over a world-wide area. The exports from Boston and Lynn were almost entirely confined to Europe.



Aden Port Trust.

The returns for the month of November, 1931, of shipping using the port were as follows:—

Merchant Vessels over 200 tons	...	No. 117	Tonnage 455,940
" " under 200 tons	...	6	719
Government Vessels	...	14	33,562
Dhows	...	80	2,779
PERIM.			
Merchant Vessels over 200 tons	...	18	67,752

The total value of imports excluding Government stores was Rs.42,01,000/- as compared with Rs.55,13,000/- for November, 1930, and of exports Rs.34,54,000/- as compared with Rs.36,19,000/-.

The total value of both imports and exports together was Rs.76,55,000/- as compared with Rs.91,32,000/- for the corresponding month of 1930.

Imports during the month were above those for November, 1930, in the case of grey, printed or dyed piece goods and private treasure; and below in the case of coffee, grain, pulse

TRADE OF THE PORT.

Article.	Unit.	Imports.		Exports.	
		Quantity.	Value Rs.	Quantity.	Value Rs.
Coal	Tons	0	0	0	0
Coffee	Cwts.	5,474	1,71,568	7,329	3,12,532
Grain, Pulse and Flour	"	41,081	2,21,013	28,013	1,42,645
Gums and Resins	"	2,882	42,828	1,398	22,975
Hardware	"	0	5,005	0	8,922
Hides, raw	No.	1,710	2,292	9,800	12,133
Oil, Fuel	Tons	28,693	8,60,790	0	0
" Kerosene	Gls.	1,080	898	3,500	2,620
" Petrol	"	4,000	5,188	3,248	4,311
Salt	Tons	0	0	30,740	3,55,280
Seeds	Cwts.	2,361	23,140	1,179	10,619
Skins, raw	No.	204,665	1,40,723	309,260	2,48,330
Sugar	Cwts.	10,992	75,519	10,558	75,548
Textiles—					
Piece Goods, Grey	Yds.	6,096,208	9,35,328	5,262,105	7,86,759
" " White	"	526,270	1,10,247	233,614	56,010
" " Printed or Dyed	"	892,521	1,78,775	1,076,900	2,62,070
Twist and Yarn	Lbs.	120,498	59,640	114,501	55,235
Tobacco, Unmanufactured	"	100,072	22,257	586,096	94,651
" Manufactured	"	31,864	35,092	14,112	13,234
Other Articles	No. of Pkges.	40,339	7,48,877	19,693	4,32,586
Treasure, Private	—	0	5,62,025	0	5,57,715
Total	—	—	42,01,205	—	34,54,178

The number of merchant vessels over 200 tons that used the port in November, 1931, was 117, as compared with 120 in the corresponding month in 1930, and the total tonnage was 456,000 as compared with 479,000.

Excluding coal, salt, fuel oil and Military and Naval stores and transhipment cargo, the total tonnage of imports in the month was 6,900 and of exports 5,200, as compared with 10,900 and 6,100 respectively for the corresponding month in 1930.

and flour, gums and resins, hardware, raw hides, seeds, raw skins, sugar, white piece goods, twist and yarn, unmanufactured and manufactured tobacco.

Exports were above those for November, 1930, in the case of coffee, raw hides, grey, printed or dyed piece goods, unmanufactured tobacco and private treasure, and below in the case of grain, pulse and flour, gums and resins, hardware, seeds, raw skins, sugar, white piece goods, twist and yarn, and manufactured tobacco.

The Port of London Authority

London's Shipping.

During the week ended January 29th, 843 vessels, representing 832,891 net register tons, used the Port of London; 424 vessels (611,585 net register tons) were to and from Colonial and foreign ports and 419 vessels (191,306 net register tons) were engaged in coastwise traffic.

\* \* \* \*

During the week ended February 5th, 839 vessels, representing 805,197 net register tons, used the Port of London; 449 vessels (629,800 net register tons) were to and from Colonial and foreign ports and 390 vessels (175,397 net register tons) were engaged in coastwise traffic.

\* \* \* \*

During the week ended February 12th, 1,093 vessels, representing 957,888 net register tons, used the Port of London; 503 vessels (765,894 net register tons) were to and from Colonial and foreign ports and 590 vessels (191,994 net register tons) were engaged in coastwise traffic.

56,000,000 Net Registered Tons.

It might have been expected that the shipping traffic of the Port of London would have suffered acutely as a result of the trade depression and financial crisis of 1931.

Statistics for the year show, however, a decline of only 3.5 per cent. in the total tonnage of shipping that used the port, the figures being 56,054,547 net register tons and 58,083,575 net register tons for 1931 and 1930 respectively.

The shipping traffic of the United Kingdom as a whole fell off by 7 per cent. during the year and even this figure is considerably less than that recorded by some of the large Continental ports.

London Passenger Traffic.

During January 2,518 passengers entered or left the Port of London via the Tilbury Passenger Landing Stage, 22 vessels, totalling 230,971 gross register tons, having used the stage during that month.

London Using More Timber.

The United Kingdom imported 6,478,981 tons of hard and soft woods last year compared with 7,155,514 tons during 1930. The quantity into the Port of London increased from 1,664,929 to 1,791,950 tons, and represented 27.6 per cent. of the total United Kingdom importations during 1931, as against 23.2 per cent. in 1930.

The increase in the supplies sent to London results from, and is another indication of, the development of industry in the South of England and the area served by the Port of London. The continually growing population as disclosed by the census last year requires housing, and larger quantities of timber are being absorbed in the erection of new factories and in the manufacture and packing of their products.

Port of London Bill, 1932.

The Port of London Authority announce that they have decided to withdraw from their Bill now before Parliament the Clauses in it which seek power to enable the Authority to acquire compulsorily the undertakings now carried on by the proprietors of Hay's Wharf Ltd. and their subsidiary companies.

In arriving at this decision the Authority have had regard, amongst other things, to the unsettled conditions in the country which financially and fiscally have materially changed since they first decided that the time was ripe to seek parliamentary powers in the direction indicated.

# The Port of New York

Latest Data issued by the Bureau of Commerce

## Foreign Trade at the Port of New York during 1931.

**P**RELIMINARY estimates of the foreign trade through the Port of New York for the year 1931 placed the volume at 18,639,000 tons and \$1,916,889,000. Slightly over 25 per cent. of the total tonnage imported and exported to and from the United States passed through the Port of New York. This tonnage was of comparatively high value, representing 42.6 per cent. of the total value of the country's foreign trade.

The Port of New York maintained its first rank position and increased slightly its relative share of the nation's commerce. However, foreign trade during the year 1931 was at a low ebb the world over and the trade through the Port of New York declined 33 per cent. in value and 17 per cent. in volume below 1930.

The decline in values was in part due to falling prices, computed by the National Foreign Trade Council to be 15 per cent. lower than in 1930.

The following table shows the value and volume of foreign trade at the Port of New York for the last ten years:—

Value and Tonnage of Foreign Trade at the Port of New York

Year	EXPORTS AND IMPORTS			
	Value	Per Cent. U.S.	Long Tons	Per Cent. U.S.
1922	\$2,860,081,000	41.2	26,639,000	27.0
1923	3,316,672,000	41.7	22,953,000	24.7
1924	3,347,701,000	40.8	23,091,000	24.8
1925	3,848,585,000	42.1	23,735,000	25.6
1926	3,887,502,000	42.1	24,060,000	21.6
1927	3,768,893,000	41.6	24,482,000	24.8
1928	3,719,962,000	40.4	26,110,000	25.0
1929	4,055,811,000	42.1	26,703,000	24.8
1930	2,853,106,000	41.3	22,478,000	23.5
1931	*1,916,889,000	42.6	**18,639,000	25.1

\*December estimated.

\*\*Six months estimated.

Exports through the Port of New York fell off more than imports. In 1931 preliminary export figures show a tonnage of 5,909,000, valued at \$852,527,000. The Port of New York's share of the country's export business amounted to 16.2 per cent. in tonnage and 35.1 per cent. in value. Severe reductions in export value of manufactured products handled in large volume through the Port of New York included: automobiles, off 45 per cent.; steel mill products, bars, ingots, etc., off 57 per cent.; fabricated iron and steel, shapes, etc., off 43 per cent.; office appliances, off 41 per cent.; industrial machinery, off 34 per cent.

Some increases were registered over last year, principally ferro-alloys, which gained 169 per cent., and vegetable oils and fats, which gained 22 per cent.

Value and Tonnage of Export Trade at the Port of New York.

Year	Value	Per Cent. U.S.	Long Tons	Per Cent. U.S.
1922	\$1,375,396,000	35.9	10,603,000	24.8
1923	1,518,852,000	36.4	11,236,000	22.6
1924	1,657,698,000	36.1	12,007,000	23.0
1925	1,774,436,000	36.2	11,771,000	23.7
1926	1,662,538,000	34.6	10,950,000	16.2
1927	1,726,110,000	35.5	11,251,000	19.8
1928	1,769,905,000	34.5	10,858,000	18.7
1929	1,903,095,000	36.3	9,738,000	17.1
1930	1,384,419,000	35.9	7,581,000	16.2
1931	*852,527,000	35.1	**5,909,000	16.2

\*December estimated

\*\*Six months estimated

While declines were also registered in imports, the relative position of the Port of New York, in respect to the country as a whole, is somewhat improved in both value and volume. The imports of the United States declined from \$3,061,873,000 in 1930 to \$2,077,352,000, or 32 per cent., while at the Port of New York it dropped from \$1,468,687,000 in 1930 to \$1,064,362,000, or 28 per cent. It is estimated that the volume of imports at the Port of New York declined 14 per cent., from 14,897,000 tons in 1930 to 12,730,000 tons in 1931, while for all ports in the United States it fell from 48,683,000 tons to 37,737,000 tons, a drop of 22 per cent.

Value and Tonnage of Import Trade at the Port of New York.

Year	Value	Per Cent. U.S.	Long Tons	Per Cent. U.S.
1922	\$1,484,685,000	47.7	13,036,000	29.1
1923	1,797,820,000	47.4	11,717,000	26.9
1924	1,690,003,000	46.8	11,084,000	27.1
1925	2,074,149,000	49.1	11,964,000	27.8
1926	2,224,964,000	50.2	13,110,000	30.0
1927	2,042,783,000	48.8	13,231,000	31.5
1928	1,950,057,000	47.7	15,252,000	32.8
1929	2,152,716,000	48.9	16,965,000	33.6
1930	1,468,687,000	47.9	14,897,000	30.6
1931	*1,064,362,000	51.2	**12,730,000	33.8

\*December estimated.

\*\*Six months estimated.

## Grain Exports in 1931.

The volume of exports of grain through the Port of New York for eleven months, January to November, 1931, compared with the same period in 1930, was as follows:—

	January to November		Net Change	
	1931 Bushels	1930 Bushels	Amount	Per Cent.
Domestic and Canadian Grain	57,990,000	52,993,000	+5,057,000	+9.6
Domestic Grain	...	...	+5,250,000	+171.8
Canadian Grain	49,685,000	49,878,000	—193,000	—0.4

Full cargoes of grain fixed from the Port of New York during 1931 more than doubled the number recorded during the previous year. Montreal showed a slight increase, while the Gulf ports fell off about 25 per cent.

A comparison of the number of full cargo fixtures from these ports for the years 1930 and 1931, is as follows:—

Year	New York	Gulf	Montreal
1930	16	48	104
1931	33	34	126

## Commerce at Port Newark.

Receipts of lumber at Port Newark during the month of December, 1931, amounted to 18,585,000 board feet, which is 19 per cent. less than the previous month and 55 per cent. less than in December, 1930, during which month the receipts were unusually large, amounting to 41,000,000-ft.

Inland shipments of lumber amounted to 14,073,000 board feet, of which 4,006,000 moved by railroad car, and 10,067,000 moved by truck.

Receipts by vessel of cargo other than lumber reached the record figure of 39,721 tons during the month, being 118 per cent. greater than in December, 1930. This increase is due mainly to the large receipts of potatoes and turnips, amounting to 14,568 tons, and being 274 per cent. greater than for the same month in 1930. Canada contributed 6,378 tons of this total, while the balance of 8,190 tons, consisting of potatoes only, came from Maine.

Thirty-one steamers arrived at Port Newark during December compared with 30 in the same month in 1930.

While the year 1931 saw a decrease of 22 per cent. in the receipts of lumber by vessel at Port Newark, being 203,995,000 board feet, as compared with 260,000,000-ft. in the year 1930, the receipts of cargo other than lumber increased from 138,673 tons to 246,169 tons, or 78 per cent.

## Vessel Movements in Foreign Trade.

The number of entrances and clearances of vessels in foreign trade at the Port of New York during the month of December, 1931, as compared with the same month in 1930, was as follows:—

	December, 1931		December, 1930	
	No. of Vessels	Vessel Tonnage	No. of Vessels	Vessel Tonnage
Entrances	472	2,202,881	539	2,497,454
Clearances	488	2,308,534	521	2,454,917

A comparison of the summaries for the years 1931 and 1930 shows a decrease in the number of entrances and clearances of 11 and 9 per cent. respectively, while in the net register tonnage of vessels entered and cleared the percentages are 6 and 4 per cent. respectively, indicating that the falling off was mainly in vessels of smaller tonnage.

	1931		1930		Net Change	
	No. of Vessels	Amount	No. of Vessels	Amount	Amount	Per Cent.
Entrances	5,828	6,662	6,662	—834	—12.5	
Clearances	6,139	6,779	6,779	—640	—9.4	
Net Registered Tonnage						
Entrances	29,416,000	31,151,000	31,151,000	—1,735,000	—5.6	
Clearances	29,942,000	31,347,000	31,347,000	—1,405,000	—4.5	

## Steamship Services and Sailings.

Records for the year 1931 show that 101 steamship lines are operating 154 foreign services from the Port of New York. During the year, one or two of the smaller lines discontinued service, and there was some curtailment in the number of sailings. However, New York still ranks far above any other port in the world in number of foreign trade sailings and superior type of vessels.

Intercoastal shippers of this port are served by 13 lines. New York is the exclusive terminal on the Atlantic seaboard for the fastest vessels in the intercoastal trade. In coastal service to South Atlantic and Gulf ports, New York has 9 lines maintaining 15 services. There are also 14 lines operating 16 services via Long Island Sound to New England points.

## The Port of New York—continued

Although shipping was badly hit by the falling off of business, passenger and freight, during the year just closed, the total of all sailings from the Port of New York declined only 6 per cent., or 1,142 less than reported for the previous year. Altogether, there were 17,623 sailings from the port during 1931, of which 4,376 were to foreign ports. Sailings to French Atlantic, East Indian, and Canadian Atlantic ports, gained slightly. Special cruises, mostly to the West Indies, increased over 1930.

In the intercoastal trade there was very little change, except for sailings of tankers to the Pacific Coast, and which fell off about 50 per cent., reflecting the depression in the petroleum industry.

A study of peak day departures indicates that the second Saturday in August is the most popular day of the year for overseas sailings. On Saturday, August 8th, 1931, records show 48 foreign and 43 domestic, or a total of 91 sailings from this port, somewhat less than those reported on Saturday, August 9th, of the year previous, which totalled 104, of which 58 were in foreign service and 46 domestic.

### Steamship Passenger Traffic.

The number of steamship passengers travelling abroad via the Port of New York dropped below the million mark in 1931. Each month of that year showed a lower total than the comparable month of 1930. For the eleven months ending November 30th, 1931, number of passengers total 823,252, as compared with 1,073,460 during the same period of 1930.

### Channel Improvements.

The expenditures of the United States Government for channel improvements at the Port of New York during the fiscal year 1931 were \$3,256,544 for new work and \$1,084,733 for maintenance, according to the Annual Report of the Chief of Engineers, U.S. Army. This represents a gain of \$454,592 or 16 per cent. over expenditures for improvement in 1930.

The more important changes in the status of the various channel improvement projects in the port during the past calendar year were as follows:—

**Westchester Creek.**—The local co-operation required by the War Department having been complied with, including the furnishing of right-of-way; spoil areas for the disposition of dredged material; and the construction of a terminal, the use of which is open to all on equal terms, the work of improving the channel of the creek has been started.

**Bronx River.**—The further improvement of Bronx River has been held up pending the construction of a new bridge at Westchester Avenue. The City of New York has recently submitted plans for the new bridge to the District Engineer, and it is expected that it will be completed in 1933, when work of channel improvement will be resumed.

**Jamaica Bay.**—Work on the jetty at the entrance to the bay was continued through the year. Approximately 5,000-ft. of this structure has been partially completed. Funds on hand, together with the amount expected to be allocated for this project, will provide the District Engineer's office with sufficient monies to complete the jetty and to commence deepening operations in the entrance channel.

**Upper Bay.**—The widening and deepening of Anchorage Channel was started, and the contract for dredging now in force will practically complete, by July 1st, the work of shifting the channel to the eastward and providing a depth of 40-ft. and width of 2,000-ft. in the Anchorage Channel.

**Bay Ridge Channel.**—The work of widening Bay Ridge Channel from 1,200 to 1,750-ft. is in progress. Hopper dredges have been steadily at work on this improvement during 1931, and nearly 30 per cent. of the project is completed.

**East River.**—Rock removal operations under contract and by the use of Government plant were active throughout the year. Due to the decrease in the cost of excavating rock, considerable savings have been made by the Army Engineers in letting contracts.

**Newtown Creek.**—The mouth of Newtown Creek was widened and Mussel Island was removed. Dredging operations have been started to deepen the channel to a depth of 23-ft., with a bottom width of 130-ft. from the mouth to Mussel Island. This will complete the modification of the project as provided by the Rivers and Harbours Bill of 1930.

**Hudson River.**—Dredging necessary to widen the Hudson River to 2,800-ft. was in progress during the past year. The District Engineer expects to have hopper dredges working on this improvement during 1932, and has sufficient funds to accomplish this.

**Passaic River.**—The improvement of the Passaic River, providing for a channel 300-ft. wide and 30-ft. deep from Newark Bay to a point 3,000-ft. above the Lincoln Highway Bridge was completed for a width of 200-ft., and it is expected to continue this work during the year, providing funds are made

available. The 10-ft. channel project on the Passaic River from the Montclair and Greenwood Lake Railroad Bridge to the 8th Street Bridge at Passaic was practically completed, and it is expected that the contract now in force will complete this improvement early in 1932.

**New York and New Jersey Channels.** The project for the improvement of the channels through Raritan Bay, Arthur Kill, and Kill van Kull is now more than 90 per cent. complete, and the only work remaining to be done is the dredging of blasted rock in the easterly half of the Arthur Kill Channel.

**Raritan River.**—The improvement of the approach channel to the Raritan River was completed, and a channel 25-ft. deep and 300-ft. wide is now available from Great Beds Light to deep water above the Long Branch Division Bridge of the Central Railroad of New Jersey. The dredging of the channel in the Raritan River from the Washington Canal to New Brunswick to a depth of 10-ft. is now under contract. This project will probably be completed this spring.

**Washington Canal and South River.**—The dredging of the 12-ft. channel in Washington Canal and South River from Raritan River to Old Bridge was completed during 1931 by the U.S. Engineers and the Port Raritan District Commission.

The recommended expenditures for channel improvements during the next fiscal year, as compared to those of the fiscal year ending June 30th, 1931, are as follows:—

	Amounts Expended 1931	Est. Amount To be Expended 1932
Westchester Creek ... ..	\$10,738	\$199,708
Jamaica Bay ... ..	86,908	950,097
Entrance Channels ... ..	104,952	311,083
Bay Ridge and Red Hook Channels ...	110,810	224,672
East River ... ..	1,122,675	1,515,578
Newtown Creek ... ..	179,332	112,763
Harlem River ... ..	20,126	136,408
Hudson River Channel ... ..	420	270,000
Newark Bay, Hackensack and Passaic Rivers ... ..	580,797	1,061,100
New York and New Jersey Channels	771,944	826,843
Raritan River ... ..	267,842	114,776
South River ... ..	—	89,847
Total ... ..	\$3,256,544	\$5,812,575

### New Pier Construction.

During the year just closed, 3,964 lineal feet of pier berthage was completed, as follows:—

Project	Constructed by	Dimensions (feet)	Increased Berthage (feet)
Pier 15, East River	Porto Rico Line (a)	600 × 80	100
Pier 16, East River	Porto Rico Line (a)	600 × 60	100
Pier D, Weehawken	Erie Railroad	832 × 101	1,664
Pier 8, Jersey City	Erie Railroad	1,050 × 70	2,100
Total ... ..			3,964

(a) Pier lengthened 20-ft.

The next two years will witness some remarkable improvements in pier facilities in the Port of New York, particularly on the North River, Manhattan waterfront. The Dock Department of the City of New York has already started on three of the five new piers between West 18th Street and West 54th Street, all of which are to be used for berthing trans-Atlantic superliners. These are in addition to Piers 32, 34 and 45, North River, the first two of which are rapidly approaching completion of substructure.

New pier improvements already planned are listed below:—

Project	Constructed by	Dimensions (feet)	Progress
Pier 23, North River	N.Y. Dock Dept.	990 × 100	Planned
Pier 25, North River	N.Y. Dock Dept.	990 × 125	Under construction
Pier 26, North River	N.Y. Dock Dept.	990 × 135	Planned
Pier 30, North River	Penn. R. R.	1,008 × 100	Planned
Pier 32, North River	N.Y. Dock Dept.	1,019 × 125	Under construction
Pier 34, North River	N.Y. Dock Dept.	1,024 × 160	Under construction
Pier 45, North River	N.Y. Dock Dept.	900 × 100	Plans approved
Pier 88, North River	N.Y. Dock Dept.	1,100 × 125	Under construction
Pier 90, North River	N.Y. Dock Dept.	1,100 × 125	Under construction
Pier 92, North River	N.Y. Dock Dept.	1,100 × 125	Under construction
Pier 94, North River	N.Y. Dock Dept.	1,100 × 125	Plans approved
Pier 96, North River	N.Y. Dock Dept.	925 × 100	Plans approved
Ft. West 70th Street	N.Y. Dock Dept.	590 × 80	Plans approved
Ft. West 72nd Street	N.Y. Dock Dept.	590 × 80	Plans approved
Pier 9, East River	N.Y. Dock Dept.	650 × 140	Under construction
Pier 6, Brooklyn	N.Y. Board of Transportation*	532 × 125	Under construction
Pier 16, Hoboken	Lampart & Holt Line	1,000 × 100	Under construction
4 Piers, Little Basin Jersey City	Port Authority (3) and Jersey City (1)	1,025/1,100 × 150 980 × 90	Preliminary survey

\*Replacing Old Pier 6 of N.Y. Dock Company, taken over in construction of Cranberry Street rapid transit tunnel.



## Lloyd's Register Shipbuilding Returns for the Year 1931

### Particulars of Output.

**D**URING the year 1931 there were launched in the world 596 vessels of 1,617,115 tons gross, of which 502,487 tons were in Great Britain and Ireland, and 1,114,628 tons abroad. The output in Great Britain and Ireland represents 31.1 per cent. of the total, as compared with 51.2 per cent. for 1930, and 54.5 per cent. for 1929. The output of the other leading countries is as follows:—

	Tons
United States ... ..	205,865
Italy ... ..	165,048
Denmark ... ..	125,974
Holland ... ..	120,296
Sweden ... ..	112,703
Germany ... ..	103,934
France ... ..	103,419

The net decrease in the world output as compared with 1930 amounts to no less than 1,272,000 tons. In Great Britain and Ireland there has been a decrease of 976,000 tons in the tonnage launched, while abroad the decrease amounts to 296,000 tons.

In Great Britain and Ireland 49 vessels, of 204,381 tons, were launched for owners residing abroad, equal to 40.7 per cent. of the total output. Nine of these vessels, of about 96,000 tons, will be registered in Norway, and 19 of about 65,000 tons are intended for the British Dominions overseas.

Of the total output of Germany, 40 vessels, of 91,773 tons, are intended for other countries; in Denmark, 13 of 69,372 tons were launched for other countries, and in Sweden, 9 of 68,163 tons.

During 1931, 46 vessels of 269,435 tons were launched for Norwegian owners, of which tonnage less than 6½ per cent. was built in Norway.

The world launches for the year include 115 vessels of over 6,000 tons each, of which 12 are of between 10,000 and 15,000 tons, and 14 of 15,000 tons and upwards. The following are the largest vessels launched during 1931:—

Country of Build	Vessel's Name	Tons
Great Britain and Ireland	Motorship "Georgic" ... ..	27,000
France ... ..	Turbine s.s. "Champlain" ... ..	28,912
Italy ... ..	Turbine s.s. "Rex" ... ..	50,100
Italy ... ..	Turbine s.s. "Conte di Savoia" ... ..	16,000
United States ... ..	Turbine s.s. "Manhattan" ... ..	30,000

The tonnage of new vessels which will be propelled by means of internal combustion engines amounts to about 920,000 tons (228,000 tons in Great Britain and Ireland). In Great Britain and Ireland motorships amount to 45.8 per cent. of the mechani-

cally propelled tonnage launched during 1931; abroad such percentage reaches 62.8.

During the year there were launched 24 vessels of about 294,000 tons which are to be fitted with steam turbines, 9 vessels of 126,000 tons for which the turbo-electric system has been adopted, and 7 vessels of 26,500 tons with a combination of reciprocating steam engines and low pressure turbines.

In Great Britain and Ireland there were launched 8 turbine vessels of 44,900 tons, 4 turbo-electric vessels of 73,600 tons, and 2 vessels of 16,200 tons with a combination of reciprocating engines and turbines.

During the year 85 tankers, of 643,000 tons, were launched, of which 30, of 242,000 tons, were built in Great Britain and Ireland. Of these 85 tankers, 73 of 553,000 tons are motorships.

Of the steam tonnage launched in the world—683,000 tons—about 538,000 tons refer to steamers fitted to burn oil fuel under the boilers, so that of the world tonnage (1,617,000 tons) launched during 1931, less than 10 per cent. is exclusively dependent on coal for propulsion.

### Progress of Shipbuilding during the Year.

Lloyd's Register quarterly returns show that at the opening of the year 1931, 2,326,000 tons were being built throughout the world. Since then a steady decrease took place, the figure for the end of December being 1,404,000 tons, thus showing a decrease of 922,000 tons, as compared with December, 1930, of which the major part (508,000 tons), is accounted for in Great Britain and Ireland.

Only five countries, at the beginning of 1931, had more than 100,000 tons of shipping under construction, viz.: Great Britain and Ireland, 401,000 tons; United States, 208,000 tons; Italy, 178,000 tons; France, 164,000 tons, and Germany, 104,000 tons.

In view of the present figures of tonnage under construction, and taking into account the fact that the amount of tonnage laid down during 1931, as shown in Lloyd's Register quarterly returns, has fallen considerably short of what would be required to fill the place of the vessels launched during the year, the position of the shipbuilding industry throughout the world cannot be regarded as favourable. The figures show, moreover, that the depression is bearing more hardly upon shipbuilders in Great Britain and Ireland than upon those in other countries.

### Vessels Classed by Lloyd's Register.

Of the merchant vessels launched during 1931, 269 of 1,146,711 tons (127 vessels of 476,698 tons in Great Britain and Ireland, and 142 of 67,013 tons abroad) were being built under the survey of the Society with a view to classification in Lloyd's Register Book. These figures represent 71 per cent. of the total world output for the year 1931.

## Notes of the Month.

### Manchester Ship Canal Company.

The Directors of the Manchester Ship Canal Company, at a meeting held on February 15th, resolved to recommend the declaration of the following dividends at the ordinary general meeting held on the 29th February, viz.: 3½ per cent. on the Manchester Ship Canal Corporation preference stock, 2 per cent. on the preference shares, 1 per cent. on the ordinary shares.

Thirty thousand pounds have been placed to reserve for contingencies and repairs and £31,804 have been carried forward.

### Bromborough Dock.

In common with all other dock undertakings on Merseyside, maintenance dredging has to be carried out at Bromborough, especially in the entrance channel. In connection with this latter, Messrs. Lever Brothers are fortunate in having two large blocks of unreclaimed land forming the entire dock area, and these are being steadily reclaimed with a view to ultimate exploitation for industrial purposes, much as Trafford Park has been since the early days of the Manchester Ship Canal. Every yard of spoil dredged is thus used to good purpose instead of being transported to sea to be dumped, and it is anticipated that this method of dealing with the dredgings at Bromborough can be followed for a good number of years. The dredging and reclamation work is in the hands of the well-known firm of dredging contractors, Messrs. Bos and Kalis, Ltd., of Slidrecht, Holland, who are specialists in this class of work and have a powerful unit of dredging and reclamation vessels permanently stationed at Bromborough.

### Weser River Shipping during 1931.

In the year 1931 the water conditions on the Weser were on an average somewhat more favourable than in 1930. Dis-

location due to high water was negligible, and no hindrance from ice occurred. Navigation of two-metre draft barges on the Middle Weser existed on 169 days. However, for six and a half months there was not sufficient water for full loading, making costly discharges necessary.

The Weser suffers from unsatisfactory water conditions, compared with other waterways and particularly canals, which can only be done away with by canalisation. The amount of traffic lost to the railways could not be regained by the final reduction of tug expenses and canal dues.

Traffic through the Bremen Weser lock in 1931, therefore, only amounted 1,540,000 tons, against 2,140,000 tons in 1930. This is a decrease of 550,000 tons or 26 per cent. Downstream 1,230,000 tons or approximately 500,000 tons, equal to 29 per cent. less, were carried. Upstream with 360,000 tons, 56,000 tons, or 13 per cent. less were transported.

### Good Work at Newport Docks.

The ss. "Morna" arrived at these docks at 8.40 a.m. on Thursday last and commenced discharging a cargo of 1,282 tons of pitwood at 10 a.m. and completed by 5 p.m. on Friday.

The vessel then proceeded to the coal hoists and commenced loading a cargo of coal at 8.45 p.m. Friday night which was completed by 12.30 p.m. on Saturday, the total quantity loaded being 1,691 tons.

The steamer sailed at 1.15 p.m. on Saturday.

### An Arrol Electric Crane for Mafeking.

Messrs. Sir William Arrol and Co., Ltd., have received from the Rhodesia Railways Ltd., 2, London Wall Buildings, London, E.C.2, an order for one 80 tons Overhead Electric Travelling Crane, for their Railway Workshops at Mafeking.

## The South Wales Docks

### Improvements carried out by the Great Western Railway Company during 1931

**T**HE anticipated revival of trade which was confidently hoped for in so many quarters during the early part of 1931 did not materialise, and like most of the other ports of the country, the South Wales Docks are still having to bear their share of the trade depression which has continued for so many years. On the whole, however, the South Wales district has stood up fairly well to the great depression, and its traders are looking forward to the future with optimism, and with the hope that we shall see a return to more prosperous times. One thing we know, that the Docks of the Great Western Railway Company are ready to meet any demands that may be forthcoming.



New 20-ton Movable Coal Hoist, North Dock, Newport (nearing completion).

Despite the decrease in imports and exports, which made 1931 the worst year since the War (with the exceptions of 1921 and 1926, when long coal mines stoppages occurred) the Company has not suspended its general programme of maintaining and improving the facilities and appliances at the Docks of Cardiff, Swansea, Newport, Barry, Port Talbot and Penarth, so as to keep them fully up-to-date and worthy of the reputation of this great maritime district. The wisdom of this policy can only be determined by future results, but the Great Western Company is showing its faith that South Wales will once again eventually come into its own.

In the face of such depression it is not surprising that the Great Western Company decided reluctantly to abandon two schemes upon which enormous expenditure would have been involved, in the proposed duplicate sea lock at Swansea, and the suggested extension of the entrance channel piers at Port Talbot. Neither of these schemes was directly remunerative in itself, nor would the facilities for dealing with shipping tonnage have been increased, while the expenditure would have run into something over a million pounds. Such a huge burden, even with Government assistance by way of contribution towards interest for a number of years, could not be faced without a reasonable prospect of permanent return on the capital involved, which could not, unfortunately, be counted upon in the face of the world-wide trade conditions. Otherwise there was no halt in the continuous programme of providing new and maintaining existing facilities at the highest standard.

Towards the end of the year there were some signs of steadiness in the weekly trade figures, which indicated that possibly the depression had reached its lowest level and that the future tendency would be upward. It is to be hoped so, and if this improvement does take place, the Great Western Docks will afford every opportunity to Exporters, Importers, Merchants, Shipowners and all others concerned in the commerce

of South Wales, to take the fullest advantage of any forward movement in world trade.

The following are the principal improvements which have been completed during 1931, and are at present in course of construction:—

#### Cardiff.

Twelve new 3-ton Electric Luffing Cranes at Queen Alexandra Dock, and one 3-ton Electric Luffing Crane at Roath Dock, have been provided.

Two new 20-ton movable Coal Shipping Hoists have been erected at the northern end of the Queen Alexandra Dock, and brought into commission. A further three similar hoists are now in course of erection, which will be completed and ready for use shortly.

A new 20-ton fixed hoist is also nearing completion at the East Dock, Cardiff.

The Coal Shipping facilities at the Roath Dock are being considerably improved, and it has been decided to instal belt conveyors of the most modern design. Work has just been completed on the first of these new appliances.

A new twin-screw tug "The Earl," has been provided. The tug is 95-ft. long, 24-ft. beam and is of 800 i.h.p.

A new double-track swing bridge has been built to carry railway and road traffic across the Lock between the Bute West Dock and Basin—a facility greatly appreciated by all who have business at the Docks.

New Gates for the Roath Dock Inner Lock are under construction.

#### Swansea.

An additional Coal Anti-breakage appliance of the Escalator type has been provided at the Kings Dock, making a total of three of these appliances at the Kings Dock; in addition, one of these appliances has also been placed in the Prince of Wales Dock.

Work is in progress on the erection of three new Coal Hoists of 20-ton capacity at the Prince of Wales Dock, and two similar hoists at the South Dock.

New Sidings are being laid down at Tennants Wharf, Prince of Wales Dock, which will facilitate the discharging of Bulk Cargoes.



Four New 3-ton Electric Cranes, King's Dock, Swansea.

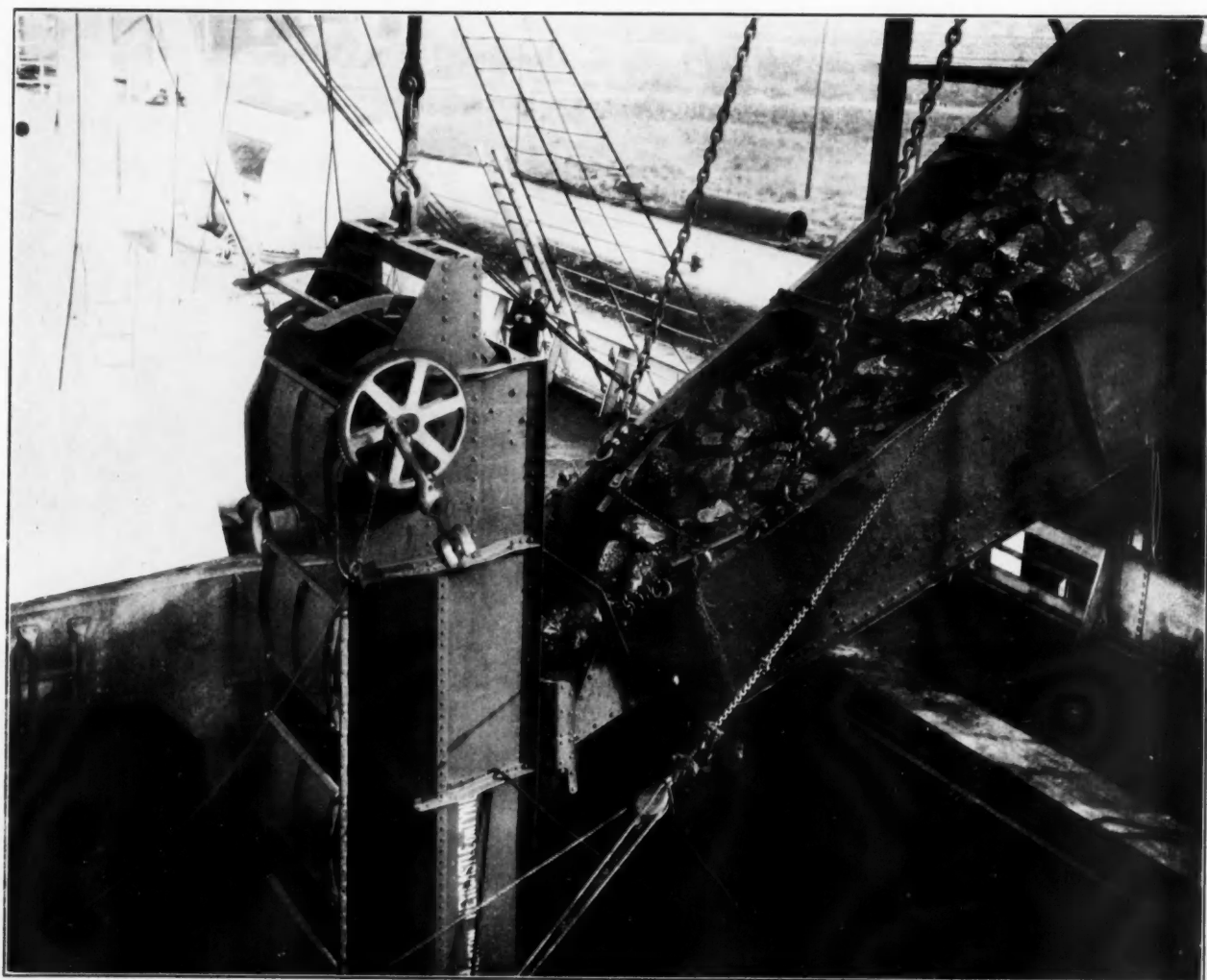
The Prince of Wales Dock Lock has been filled in and a new length of dock quay wall has been constructed across the inner entrance to the Lock. The additional land resulting from this work will give added quayside accommodation and facilities.



## *The South Wales Docks*



*New Belt Conveyor Type of Coal Shipping Appliance, nearing completion at the Roath Dock, Cardiff.*



*Escalator Coal-Shipping Anti-Breakage Appliance, Port Talbot Docks.*

*The South Wales Docks—continued*

Six additional 3-ton Electric Level Luffing Cranes have been provided at the Kings Dock.

Extensive alterations and improvements are being made in the Hydraulic Power at the Swansea Docks.

Renewal of Electric Cables and improvement of distributing arrangements at the South Dock Sub-station are in hand.

New Impounding Pumps are being provided at the South Dock Basin.

Transit Shed "A," Kings Dock, has been extended on the northern end, resulting in an additional area of 23,940 square feet of covered accommodation.

**Newport.**

A new movable Hoist having a lifting capacity above water level of 56-ft., with high and low level traversers for loaded and empty wagons respectively and capable of dealing with 20-ton wagons, has been erected in substitution of No. 6 Hoist, North Dock. This is the completion of a pledge given to the people of Newport when the old Town Dock was closed a year or two ago.

Five new 3-ton Electric Luffing Cranes have been provided on the South Quay, South Dock.

**Barry.**

Contracts have been entered into for the erection of thirteen new 20-ton Coal Hoists, and work is in hand on four of these appliances.

Six new 3-ton Hydraulic Movable Cranes are now in course of erection at No. 2 Dock.

Contracts have been let for the electrification of the Hydraulic Power Plant.

**Port Talbot.**

Two new 20-ton Hoists in place of the present Nos. 3 and 5 Hoists are in course of erection.

A new Coal Shipping Anti-breakage Appliance of the Escalator type has been provided at No. 4 Hoist.

Two new 3-ton Hydraulic Cranes are being provided for General Cargo Traffic.

**Penarth.**

Three new 3-ton Hydraulic Cranes have been provided. Improvements have been made in the Hydraulic Power Station by the installation of an Economiser.

*Efficiency of the South Wales Docks.*

We feel sure that the perusal of the preceding list will indicate what the Great Western Company has done and are still doing to maintain the standard of efficiency set up since



Three New 3-ton Hydraulic Cranes, Penarth Dock.

the amalgamation, and that traders can be confident that when the expected improvement in trade eventually does take place the South Wales Docks will hold their own among the premier ports of the country.

*Canadian Notes***Reconstruction Work at Port of St. John, New Brunswick.**

On December 1st the inauguration of the 1931-32 shipping season took place at the Port of Saint John, New Brunswick, and it is notable that on that date also the formal opening took place of the reconstructed works on the west side of the harbour. On June 22nd last a disastrous fire reduced the water front at West Saint John to ruins, and since that time the Saint John Harbour Commissioners have been engaged in the reconstruction of the facilities in order to enable the port to cope with the heavy traffic expected during the winter season. In the space of twenty weeks only, the harbour at West Saint John has been provided with six berths, complete with steel sheds and grain conveyors, together with a frost-proof warehouse of 30,000 barrels capacity.

The restored facilities will enable the business of the port to be carried on efficiently during the winter. Most important in the West Saint John shipping is the business of the Canadian Pacific Steamships, Ltd., scheduled to include 45 arrivals and 45 departures during the winter season.

**More Freight Handled by Canadian Canals Last Year.**

The Dominion Bureau of Statistics at Ottawa has forwarded to the Reference Library, Canada House, Trafalgar Square, London, S.W.1, its "Annual Summary Report on Canal Statistics for December and the Season of Navigation, 1931." From this it appears that Canadian Canals handled an increased freight tonnage last year. Expansion in the case of the Welland Ship Canal amounted to 1,185,976 tons. The figures for the two years were as follows: 7,273,886 tons in 1931, and 6,087,910 tons in 1930. The Canadian lock at Sault Ste. Marie also handled half a million tons more freight than in the previous twelve months. Tonnage in the case of the St. Lawrence Canal system and the minor canal systems was slightly reduced. Taking the Canadian canals as a whole, however, traffic during the past season of navigation is reported at 16,196,715 tons, a gain of 1,393,381 tons.

Increases in the Welland Canal traffic are attributed to the expansion in shipments of bituminous coal and iron ore to

Hamilton and Toronto. Shipments of bituminous coal, for instance, rose by 717,401 tons to 2,041,940 tons, whilst iron ore cargoes rose to 295,592 tons, an increase of 254,730 tons during the twelve months. Wheat cargoes decreased by 399,656 tons to 2,146,418 tons, and decreases were recorded for other grains.

The total freight tonnage reported for the St. Lawrence canals amounted to 6,036,980 tons, a decline of 142,043 tons during the twelve months. The Sault Ste. Marie canals (Canadian and United States locks) handled a total traffic of 44,614,168 tons, the lightest tonnage experienced since 1908, representing only 61 per cent. of the 1930 tonnage. The large decrease was in iron ore, which dropped from 47,050,854 tons in 1930 to only 24,259,899 tons last year. Wheat shipments dropped from 243,832,889 bushels to 189,272,600 bushels. Traffic through the Canadian lock, however, increased from 1,691,171 tons to 2,227,410 tons.

**Opening of the Port of Churchill, Manitoba.**

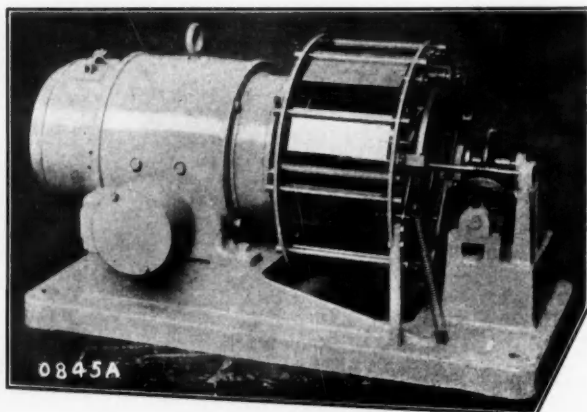
The Manitoba Government announces that the townsite at Churchill will be opened for settlement within the next few months. Concurrently with this decision, the Dominion Minister of Railways and Canals intimates that the port will be in a position during the coming summer to accept such commerce as will be offered. The opening up for traffic of the Hudson Bay Railway to Churchill will be a necessary part of the arrangements to bring the port into regular commercial operation.

The port of Churchill was opened experimentally last September, when two shiploads of wheat were despatched to European ports after the partial completion of the terminal elevator facilities provided by the Dominion Department of Railways and Canals. The port works at Churchill have been entirely constructed by the Dominion Government, but the townsite is controlled by the Province of Manitoba, which is concerned with settlement questions there and with the provision of municipal utilities.

## The British Industries Fair

Messrs. Gent and Co., Ltd., Faraday Works, Leicester, Stand K.N. 1, will be showing the following:—New Frequency "Electro-matic" Clocks of various designs suitable for A.C. 50 Period Supplies where frequency is controlled. New frequency "Pul-syn-etic" Transmitter operated from a Frequency Controlled Mains and suitable for driving any number of ordinary Impulse Clocks from a local battery. A Frequency

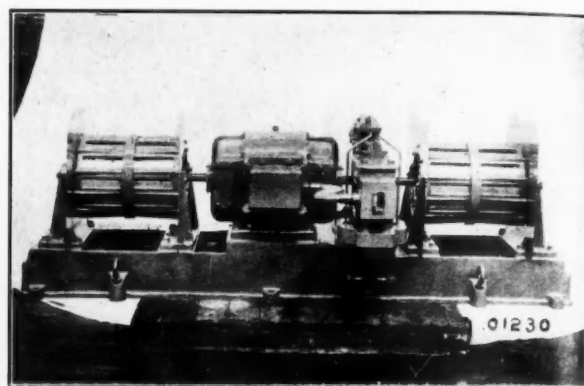
Electrically operated liquid level indicating and recording apparatus, also alarms, consisting of a water-tight iron clad transmitter suitable for fixing in the open over reservoirs, tanks, etc., which operates contacts at every inch rise or fall of the water or liquid over any distance. Suitable for single line working. The indicator or recorder being fitted with metal rectifiers and relays.



*The Coding Pattern.*

Metal Transmitter with two clock dials, one showing Greenwich time with hour, minute and second hands, the other clock dial showing Frequency time with hour, minute and seconds hands. A "Pul-syn-etic" Time Transmitter controlling the clock on the Stand, also clocks in the Exhibition operated by an Exide Sealed High Tension Battery, Trickle charged from the A.C. mains, and so is not affected by any stoppage of mains current. A "Pul-syn-etic" Sub-Transmitter fitted with relay "Reflex" Pendulum Control operated from Prime Transmitter for use in buildings which are separate from the main building, and overhead wires are used, so that if wires are carried away, Time Transmitters continue to operate. A "Pul-syn-etic" Electric Turret Clock, consisting of three 3-ft. dials with exposed hands, operated by a "Waiting Train" movement, and which is controlled by the Time Transmitter on the Stand. A Bell made by Taylor's of Loughborough, weighing about 1-cwt. will count the hours, the Hammer being operated by a motor driven striking apparatus through an hourly contact maker operated by the Time Transmitter.

"Tangent" Flame-proof Mining Bells, relays of improved pattern, passed by Home Office for bare wire signalling for single or parallel operating. "Tangent" Flame-proof Mining Pushes and Pulls, also keys with improved operating handle arranged to prevent fatigue of the operator during continual use. A new pattern Flame-proof Two-Way Mining Pull for use underground where bare wire signalling is not desirable. "Tangent" Flame-proof Mining Telephones, magneto and battery call. Also iron-clad switchboards.



*The Coding Syren, which is operated by a switch.*

Motor syrens in sizes ranging from one-tenth to 8 h.p. suitable for public fire alarms, also sound signals in mines and factories. Automatic motor syrens, new and improved coding pattern for docks, harbours, lighthouses, etc.

Staff locaters (lamp signals), for calling members of staff immediately in case of trunk or other urgent calls, suitable for hospitals, business houses and factories. Telephones for office, institutes, business houses, hotels, etc., including the "Parsons-Sloper" Inter-communication telephones, "Electromatic" central battery interphones, push button call, "Regent" telephones, and switchboards. Indicators, luminous, pendulum and drop pattern also door signals luminous and non-luminous for houses, hotels and ships. Bells, wood-cased, made for battery operating also made with laminated cores for use with a small transformer. Bells, iron-cased, weather-proof, suitable for battery, D.C. and A.C. mains up to 250-volts. Bells for A.C. are fitted with laminated cores. Pneumatic bells and pushes for buses and trams.

Idle machine and output recorders. Police signal or call lamp relays passed by G.P.O. for use on police boxes in connection with the telephone for operating a coloured lamp fixed outside the police box. Relays for controlling power or motor circuits at a distance with 2-way operations suitable for operating contactor for starting and stopping motor syrens for fire alarms, etc. Main switch, relay-operated from a distance, double or triple pole, 500-volts up to 50 amperes. Radiograms, hospital sets, moving coil speakers, mains transformers, chokes, wave traps, etc.

## Bremen's Seagoing Shipping Traffic in 1931

The figures now published show that Bremen has still been able to maintain a healthy basis, even in 1931. Her leading company, the North German Lloyd, in spite of the absolute losses in the number of passengers carried has yet been able to increase its share among the important shipping companies. It is also to be noted that from June until the end of the year seagoing shipping traffic only decreased 2 per cent.

A decrease in goods traffic of 19½ per cent. hits harbours, trade and shipping heavily, but is still within the bounds of the general decline, although Bremen especially was very hard hit by the position on the textile market and the measures adopted in the grain import trade.

Seagoing shipping for Bremen account again showed a de-

crease in December; 688,462 net registered tons arrived, or 25,000 net registered tons, equal to 4 per cent. less than in November and approximately 97,000 net registered tons, equal to 13 per cent. less than in December, 1930.

During the past year 8,583,676 net registered tons arrived, against 9,133,271 in the year 1930, i.e., 549,595 net registered tons, or 6 per cent. less.

In seagoing goods traffic of the five most important Weser Ports there was also a relapse after the activities of November. Imports and exports together only reached 461,000 tons. That is, 24,000 tons or 5 per cent. less than in November and 61,000 tons less than in December, 1930. Imports were, with 313,000 tons, 17,000 and 41,000 tons respectively less, if compared with the previous month and December, 1930, and exports with 148,000 tons, showed a decrease of 7,000 tons and 17,000 for the same periods.

In the year 1931, 5,193,000 tons were imported and exported, against 6,449,000 tons in 1930. Thus the fall compared with 1930 is 1,256,000 tons or 19.5 per cent. The greater part of the decrease is in imports. They fell from 4,191,000 tons in 1930 to 3,207,000 tons, i.e., 23.5 per cent. While the decrease in 1930 against 1929 was due in the first place to lower imports of grain, due to Governmental measures, nearly all goods were hit in 1931, especially ore, timber, cotton, wool and grain. Exports in 1931 amounted to 1,986,000 tons. They lost 271,000 tons or 12 per cent., compared with 1930, the decline was mostly in potash and piecegoods.

### "Sentinel" Steam Locomotives FOR DISPOSAL

- NE Double Engined Type Loco 200 h.p. fitted with two standard boilers and engines.
- NE 100 h.p. standard up-to-date Railway Type Loco.
- NE 100 h.p. Four Wheel Shunting Loco rebuilt with "Sentinel" boiler, engine and transmission gear.

These secondhand Locos are in excellent condition and are offered at low prices.

For full particulars apply to:

Yates Engineering Services Ltd., 197, Victoria St., Westminster, S.W.1



## Irish Harbour Matters

### Dublin

#### Dublin Port Progressing—Chairman and Vice-Chairman Re-elected.

**M**R. C. E. McGLOUGHLIN was re-elected Chairman and Mr. Walter Baird Vice-Chairman of the Dublin Port and Docks Board on January 14th. The Chairman was invested with the Board's new badge of office by the Lord Mayor of Dublin (Alderman A. Byrne).

Warm tributes to the worth of both chairman and vice-chairman were paid by Mr. A. W. Hewat, Mr. Kennedy, the Lord Mayor, Major Hollway and Mr. P. Leonard, T.D.

On the motion of the Chairman, seconded by Mr. Baird and supported by other members, a vote of thanks was conveyed to every member of the staff and to every other worker in the employment of the Board.

Mr. E. H. Bailey, on behalf of the staff, suitably replied.

#### Review of the Year's Work.

The Chairman, in reviewing the work of the Board during 1931, said that they had had some heavy items in maintenance. The new gates of the graving dock, costing about £2,000, were built by the Dublin Dockyard Co., who also built a new steam hopper barge at a cost of £21,000. The heavy flooding in the autumn necessitated abnormal dredging along the quays and brought the year's dredging to the record figure of 1,675,000 tons, the largest in the history of the port.

The craneage had been efficiently maintained and extended by the addition of four of the most modern and improved type of wharf cranes, bringing the total number up to 23.

As regards development, the deep water quay at Alexandra Basin had been completed, and now gives 1,400-ft. of berthage with a depth of 32-ft. at low water. It is fitted with craneways, railways and subways to take oil and suction pipes, and a tunnel for cables and water, etc.

The Board was also engaged in building a retaining wall enclosing about 60 acres of foreshore adjoining the East Wall, which the Corporation is filling in, and which in some years to come will form valuable sites for letting by the Board, and add to the already considerable income from the sources developed in the past.

The Board had also concluded during the year negotiations with the Corporation to purchase their reversion of the lease of the old Custom House Docks recently filled in. This would enable the Board to develop this valuable site, and some suggestions in that direction would be put before them for consideration very shortly.

The storage of tobacco in the Custom House Docks was still increasing, and further accommodation had been provided. There were over 12,000 hogsheads of tobacco in bond at present.

The Board had spent about £53,000 in developing the storage in the docks during the past five years, and a new grain handling plant had been installed by the Merchants' Warehousing Company.

The Board had also to undertake the rebuilding of Butt Bridge. This might be considered more of a city than a port development, but it had put a considerable amount of work on their engineering and head office staffs. President Cosgrave and the Minister for Local Government had inspected the bridge and expressed great satisfaction at its appearance and the progress made.

As regards the Eucharistic Congress, the Harbour Master, Capt. Webb, was doing everything he could to accommodate as many ships as possible on that occasion within the port, and helping in every way he could to provide facilities for the transfer of passengers from those ships that would have to be out in the bay, and at the lowest possible cost.

"The position at the moment is," said Mr. McGloughlin, "that about twenty large liners are chartered for the Congress; eleven of these will be berthed in the port, and the others will be anchored in the Bay and served by tender."

"Many of these are luxury liners of 20,000 tons or more, and will carry about 20,000 people in all."

"The tonnage entering the port has increased by a little over 65,000 tons. There was an increase in inward goods, but a decrease in exports. So far as the port is concerned, they about balance. There was a reduction of income from dues on ships and goods of about £8,000. This, however, was consistent with the reduction in rates made by the Board in June last."

"The trading surplus on the year would be roughly £2,000, which must be regarded as very satisfactory."

"Owing to the quota system and world depression, emigration from this country had almost ceased. This will leave, as against previous years, about 25,000 young able-bodied people of both sexes to be provided for, and they might anticipate a like increase of population over each year for some years to come."

"What is being done," he asked, "to find employment for this valuable labour asset, which was probably more suitable for occupation on the land than elsewhere?" He suggested that

something should be done even at what might appear to be considerable sacrifice to make it worth while for these young people to remain and work on the land.

Mr. P. J. Munden said that the Chairman's resumé of the activities of the Board was very heartening.

Mr. James Larkin, sen., agreed that the port had improved, but they had done nothing to provide for the repair and cleansing of ships. It was the duty of the Board to provide an up-to-date graving dock and to improve the approach to the port. With regard to Butt Bridge, he thought they should get the considered opinion of those in authority to see if it would be possible to have it opened by one of the Cardinal Princes during Eucharistic Congress Week.

Mr. Hewat said that Butt Bridge would be an important junction in connection with the whole lay-out of the city, and would be of more importance to the citizens than to the Board. The outlook as regards the world's prosperity was not very bright, but here the prospects were not so gloomy and they had the prosperity of the country in their own hands.

The Chairman pointed out that although the rebuilding of Butt Bridge had occurred during his chairmanship, efforts to have it reconstructed had been made many years previously.

Major Hollway said that Dublin Port had nothing to fear in the matter of despatch. Dublin was not a slow port. It was as fast as any first-class port, except London, which had special conditions. In the matter of tobacco handling at the Custom House Dock, the Board had gone to great expense and had an extraordinarily efficient plant. It was now time for the Government to try and foster that trade as much as possible so as to provide more employment. In the matter of charges, Dublin was as reasonable as, if not more reasonable than, any other first-class port.

#### The late Mr. George Byrne.

At a subsequent meeting of the Dublin Port and Docks Board a vote of condolence was passed to the relatives of the late Mr. George Byrne, for 29 years a member of the Board, of which he was vice-chairman in 1912 and 1920 and chairman in 1913 and 1921. Mr. Byrne did everything possible to further the interests of the port.

#### Accidents at the Port of Dublin.

Major Hollway drew attention to the number of accidents reported to the Board and asked if they were serious.

Mr. Walter Baird, vice-chairman, stated that they were mostly minor accidents, and steps were being taken to see if the matter could be remedied.

### Cork

#### Cork Harbour Board—New Shipping Service.

Mr. J. Morris, of Liverpool, appeared before the Cork Harbour Board on January 20th last in connection with a cattle service which he proposes to run between Cork and Birkenhead. His company, he said, wanted to secure lairage and other accommodation for this purpose. A site on the Tivoli reclamation scheme would suit best, but would probably be too expensive. Another good place would be the north deep water quay. He suggested that the Harbour Board should erect a shed and lairages for them on that site, and the money spent would be reimbursed by the company over a series of years. He thought there was sufficient room for another company, especially in view of the fact that they could bring other trades into Cork which previously had not been handled by the port. He intended, he said to bring two ships to Cork and to have two sailings per week. He estimated that the Harbour Board would gain from £1,500 to £2,000 per year from the new company by way of dock dues.

In reply to questions, Mr. Morris said he had been trading from Dublin and other ports, and had had the cattle freights reduced as regards Dublin and Drogheda. His company had as much capital as was required for the purpose, and if permission was given them they were in a position to run services from Cork at the beginning of next May.

The Free State Department of Agriculture prescribed certain regulations as to the area per beast in lairages, and he did not know exactly what he would want. The site chosen, however, measured 700-ft. by 30-ft., and it was intended to use about 200-ft. of this for sheds, the rest to be devoted to lairage. He thought they would want accommodation for 500 or 600 beasts.

It was decided to submit terms to Mr. Morris.

#### Cork Harbour Bill.

At its meeting on January 28th the Cork Harbour Board decided that the Cork Harbour Bill, which at present stands adjourned until April 13th next, be proceeded with in the coming session of the Oireachtas, in an amended form, the amended Bill to provide only for: Repeal of the 12½ per cent. clause and the substitution of a fixed schedule of goods dues; the appointment by the Free State Minister for Industry and Commerce of an auditor with power of surcharge; conferring on the Minister

*Irish Harbour Matters—continued*

power to revise all rates, dues, tolls and charges, whether by way of increase or decrease; fixing December 31st as the close of the Board's financial year.

Some discussion took place on these proposals, and Mr. W. Dinan thought that the merchants and shippers should be consulted before the Bill was proceeded with. If the Bill was passed and the Board imposed a maximum schedule of dues, they would increase their income by £30,000, and they could hardly expect the merchants not to oppose that.

The general manager disagreed with Mr. Dinan's estimate and presumed that the schedule of dues would be examined again by the Board before it was passed.

The Law Agent said that the proposed schedule did not affect tonnage dues at all. It gave the Minister power to revise the rates, and he was sure that the Department would see that no oppressive rates were put on any section.

*Limerick**Limerick's Harbour Contract.*

The Mayor presided at a meeting of the Limerick Harbour Board, at which a letter was read from the Free State Department of Industry and Commerce sanctioning the loan of £100,000 payable in 50 years at 5 per cent. to cover interest and capital, and subject to the conditions that the contract price shall not exceed £139,947 18s. 11d., not allowing for contingencies, and that the loan be issued at 98 per cent.

Mr. Ryan, C.E., said there was something mentioned in the Minister's letter as to the issue of stock at 98 per cent. That was incorrect; the issue was to be at £100.

Mr. Tracey said that the Bank of Ireland was to issue the stock and it was the bank which was to receive the 2 per cent. on the issue.

Mr. Ryan: The stock is to be issued at £100 to the public.

The Secretary said it was only a matter of arrangement with the bank.

The matter was left to the Secretary for arrangement.

Previous to the meeting, a conference was held by the Dock Sub-Committee with Mr. Nyland, engineer to the contractors, the Netherlands Harbour Works Co., as to points of variation

proposed by the contracting company, whose tender as accepted was £139,947 18s. 10d. No agreement was reached in the conference with Mr. Nyland.

The Harbour Board decided to the terms of contract specified, and Mr. Nyland said he would communicate further with his company on the matter, when another conference will be held.

*Belfast**Meeting of the Belfast Harbour Commissioners.*

At a meeting of the Belfast Harbour Commissioners, Mr. R. E. Herdman, D.L., in the chair, the Harbour Master (Captain McIntyre) reported that the total tonnage of the vessels which arrived at the port from January 1st to December 31st, 1931, was as follows:—Coastwise and cross-channel, 2,816,897, an increase of 6,788 over 1930; foreign, 782,243, an increase of 44,987; non-trading, 98,079, a decrease of 30,272; total, 3,697,219, an increase of 21,508. The chairman said they would all be pleased to see that the tonnage recorded for 1931 was the largest that had ever entered the port; in fact, it exceeded 1930, which in itself was a record.

*A Good Month.*

The latest report of the Harbour Master showed that between January 1st and 31st of the present year the tonnage reaching the port was: Coastwise and cross-channel, 227,828, a drop of 6,015 compared with the same month in 1930; foreign, 82,926, an increase of 19,176; non-trading, 929, a decrease of 5,899; total, 310,783, an increase of 7,272.

*The Goods Traffic.*

The annual return of goods dealt with at Belfast Harbour has just been issued by the Belfast Harbour Board and contains a number of interesting figures, especially as the statistics for 1930 are also given. The figures for the corresponding period show an interesting and in some cases surprising comparison and, taking it all over, the return goes to show that in spite of trade depression and other adverse circumstances, the volume of traffic passing through the port is swelling daily.

*Port of Southampton Topics.**February Proves a Bad Month.*

**F**EBRUARY has been about the worst month Southampton has had for a very long time. The number of sailings from the port has been down to a very low figure, and the outlook is not very bright for the immediate future.

The services on the North Atlantic particularly show evidence of the prevailing depression. In an ordinary month in the summer there are from 40 to 50 sailings from Southampton to New York by the big liners, and in the winter the number is normally about 30. But in February this year there were 17 sailings from Southampton and in the other direction—New York to Southampton—the number was as low as nine.

These figures were lower than January totals, which were 24 sailings from Southampton to New York, and 15 in the other direction. There were in February, in fact, less than 30 "big ship" sailings from Southampton, counting other routes besides the New York route.

The cutting down of the services has been due, of course, to the absence of passenger business, but the position so far as Southampton is concerned has been aggravated by the fact that more vessels than ever before are away cruising. The growth of the cruising business in about the last four years has been one of the bright spots of the shipping industry, and each year sees an increase in the number of vessels carrying out these pleasure trips. But the cruising business does not help the docks much, and Southampton figures are likely to show a big drop in consequence. There are no cargoes to load or unload for pleasure cruises.

It is important to remember, however, that although there has been in the past year a decline in nearly all branches of dock business, the returns so far as 1931 was concerned were still high. Each year for the last six years prior to 1931 increases in the dock figures have been recorded, and though there is now a decrease, the statistics are still favourable compared with three or four years ago.

Most of the big ships on the North Atlantic run have been undergoing their annual overhaul during the past two months, among them the "Olympic," "Homer," and "Mauretania." The last named emerged from her overhaul, which lasted a month, on February 17th. The "Berengaria," on her arrival at Southampton on March 10th, will lay up for about six weeks for overhaul. That will be the last of the overhauls except for putting the "Empress of Britain" and the "Empress of Australia" "ship-shape" when they come back from their cruises, and possibly the overhaul of the "Empress of France"

in the early spring when she arrives back after spending the winter laying up on the Clyde.

In regard to cargo, matters have been quieter than usual. The biggest factor in this connection is that so many of the vessels which normally use the port are either laid up or are engaged on pleasure trips. Generally speaking, the cargo arriving at Southampton is largely carried in the ocean-going liners, and it is this class of vessel which has been conspicuous by its absence in recent weeks.

*January Statistics show Decreases.*

The official Southampton Docks statistics for the month of January are not re-assuring, although better returns could not very well have been expected in view of the adverse factors operating at present.

Inward the number of vessels dwindled from 231 to 216, and outward from 243 to 220. The tonnage figures suffered accordingly. The inward gross tonnage dropped from 1,107,773 in January, 1931, to 917,945, a fall of 189,828; and outward the figure slumped from 1,141,155 to 938,751, a decline of 202,404.

In net tonnage the inward total slipped back from 590,153 to 484,536, and outward from 610,815 to 511,410, making the decreases 105,617 inward and 99,405 outward.

The cargo returns showed a big decline. Inward there was a decrease of 7,328 tons and outward 6,579 tons, the figures being: inward 33,321 tons against 40,649 tons, and outward 29,665 tons compared with 36,244 tons.

Passenger traffic also fell away badly, the inward figure reaching only 6,214, a decrease of 1,012, and the outward total dropping from 9,262 to 7,529. The number of troops inward dropped by 1,389, the total being 1,767 as against 3,156, but outward there was an increase of 1,535 on the 2,875 recorded in January, 1931.

Things are very quiet in the cross-Channel services of the Southern Railway Company particularly from the passenger point of view, and in consequence of the slackening off in the number of travellers the Havre-Southampton service has been curtailed to three sailings and three arrivals each week, instead of a sailing and an arrival each day, as has been previously the custom.

So far as cargo is concerned, both January and February have been exceptionally quiet, and although there have been suggestions that goods were being rushed into the country at other ports before the imposition of the latest scale of import duties, Southampton has not experienced this boom in cargo.

See by Harrison

Apr 1874

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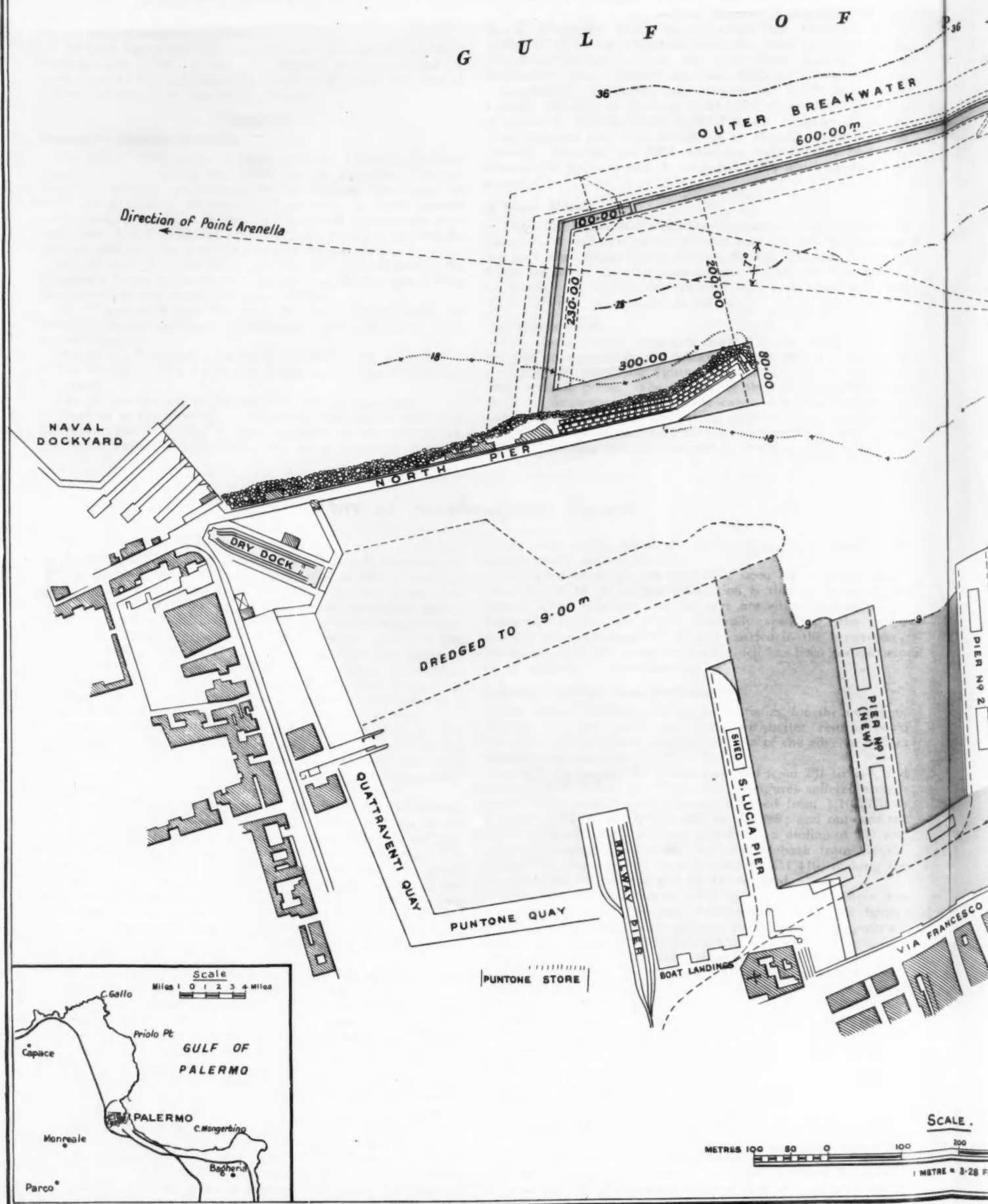
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# PORT OF PALERMO.

UNDER THE JURISDICTION OF THE CAPTAIN OF THE PORT OF PALERMO.



NOTE.

New Works in hand or completed are coloured RED.

Areas being dredged to -9.00<sup>m</sup> " DARK BLUE.

